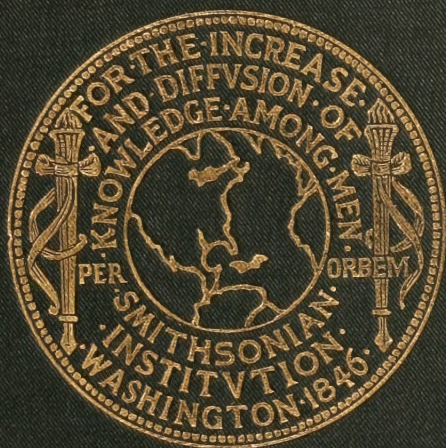














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Department of the Interior:

U. S. NATIONAL MUSEUM.

# BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

BIBLIOGRAPHIES OF AMERICAN NATURALISTS.—  
III. PUBLICATIONS RELATING TO FOSSIL INVERTEBRATES.

BY

JOHN BELKNAP MARCOU.

WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.





# Department of the Interior:

U. S. NATIONAL MUSEUM.

— Serial Number 40 —

ADVERTISEMENT.

## BULLETIN

OF THE

UNITED STATES NATIONAL MUSEUM.

No. 30.

PUBLISHED UNDER THE DIRECTION OF THE SMITHSONIAN INSTITUTION.

WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.

## ADVERTISEMENT.

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This work (Bulletin No. 30) is the fortieth of a series of papers intended to illustrate the collections of natural history and ethnology belonging to the United States, and constituting the National Museum, of which the Smithsonian Institution was placed in charge by the act of Congress of August 10, 1846. It constitutes the third of the series of bibliographies illustrating the work of the Museum.

It has been prepared at the request of the Institution, and printed by authority of the honorable Secretary of the Interior.

The publications of the National Museum consist of two series—the Bulletins, of which this is No. 30, in continuous series, and the Proceedings, of which the eighth volume is now in press.

The volumes of Proceedings are printed signature by signature, each issue having its own date, and a small edition of each signature is distributed to libraries promptly after its publication.

From time to time the publications of the Museum which have been issued separately are combined together and issued as volumes of the Miscellaneous Collections. These are struck off from the stereotype plates from which the first edition was printed, and in this form are distributed by the Smithsonian Institution to libraries and scientific societies throughout the world. Volume 13 of these collections includes Bulletins 1 to 10, inclusive; volume 19, volumes 1 and 2 of the Proceedings; volume 22, volumes 3 and 4 of the Proceedings; and volume 23, Bulletins 11 to 15, inclusive.

Full lists of the publications of the Museum may be found in the current catalogues of the publications of the Smithsonian Institution.

SPENCER F. BAIRD,

*Secretary of the Smithsonian Institution.*

SMITHSONIAN INSTITUTION,

*Washington, December 1, 1885.*

BIBLIOGRAPHIES OF AMERICAN NATURALISTS.

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III.

BIBLIOGRAPHY OF PUBLICATIONS

RELATING TO

THE COLLECTION OF FOSSIL INVERTEBRATES

IN THE

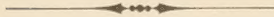
UNITED STATES NATIONAL MUSEUM,

INCLUDING

COMPLETE LISTS OF THE WRITINGS OF FIELDING B. MEEK,  
CHARLES A. WHITE, AND CHARLES D. WALCOTT.

BY

JOHN BELKNAP MARCOU.



WASHINGTON:  
GOVERNMENT PRINTING OFFICE.  
1885.





## CONTENTS.

|                                                                                                      |       |                               |
|------------------------------------------------------------------------------------------------------|-------|-------------------------------|
| Introductory note.....                                                                               | Page. | 7                             |
| Part I.—The published writings of Fielding Bradford Meek.....                                        |       | 9                             |
| Part II.—The published writings of Charles Abiathar White.....                                       |       | 113                           |
| Part III.—The published writings of Charles Doolittle Walcott.....                                   |       | 183                           |
| Part IV.—Publications based upon the Paleontological collections of the United States Government by— |       |                               |
|                                                                                                      | Page. | Page.                         |
| Jacob Whitman Bailey.....                                                                            | 203   | Alpheus Hyatt..... 239        |
| Timothy Abbot Conrad.....                                                                            | 205   | Jules Marcou..... 241         |
| James Dwight Dana.....                                                                               | 223   | John Strong Newberry..... 245 |
| Christian Gottfried Ehrenberg.....                                                                   | 229   | David Dale Owen..... 247      |
| James Hall.....                                                                                      | 231   | James Schiel..... 253         |
| Angelo Heilprin.....                                                                                 | 237   | Benjamin F. Shumard..... 255  |
| Robert Parr Whitfield.....                                                                           | 259   |                               |
| Supplement.....                                                                                      |       | 273                           |
|                                                                                                      | Page. | Page.                         |
| J. W. Bailey.....                                                                                    | 273   | Hiram A. Prout..... 273       |
| T. N. Nicollet.....                                                                                  | 273   | Benjamin F. Shumard..... 274  |
| Index of genera and species.....                                                                     |       | 275                           |
| General Index.....                                                                                   |       | 327                           |





### INTRODUCTORY NOTE.

In preparing the following catalogues chronologic order has been followed under the different authors,\*and in Part IV the fifteen different authors are arranged, first, alphabetically and then chronologically under each author. Correctness of bibliographic form and detail has not been so much sought after as completeness and accuracy in the numerous references. A general alphabetic index of species will be found at the end of the volume. The compiler will be glad to have his attention called to any errors or omissions. Dr. White's bibliography is prepared from data furnished by himself. I am much indebted to Dr. White for his kind advice and help in the preparation of the work.

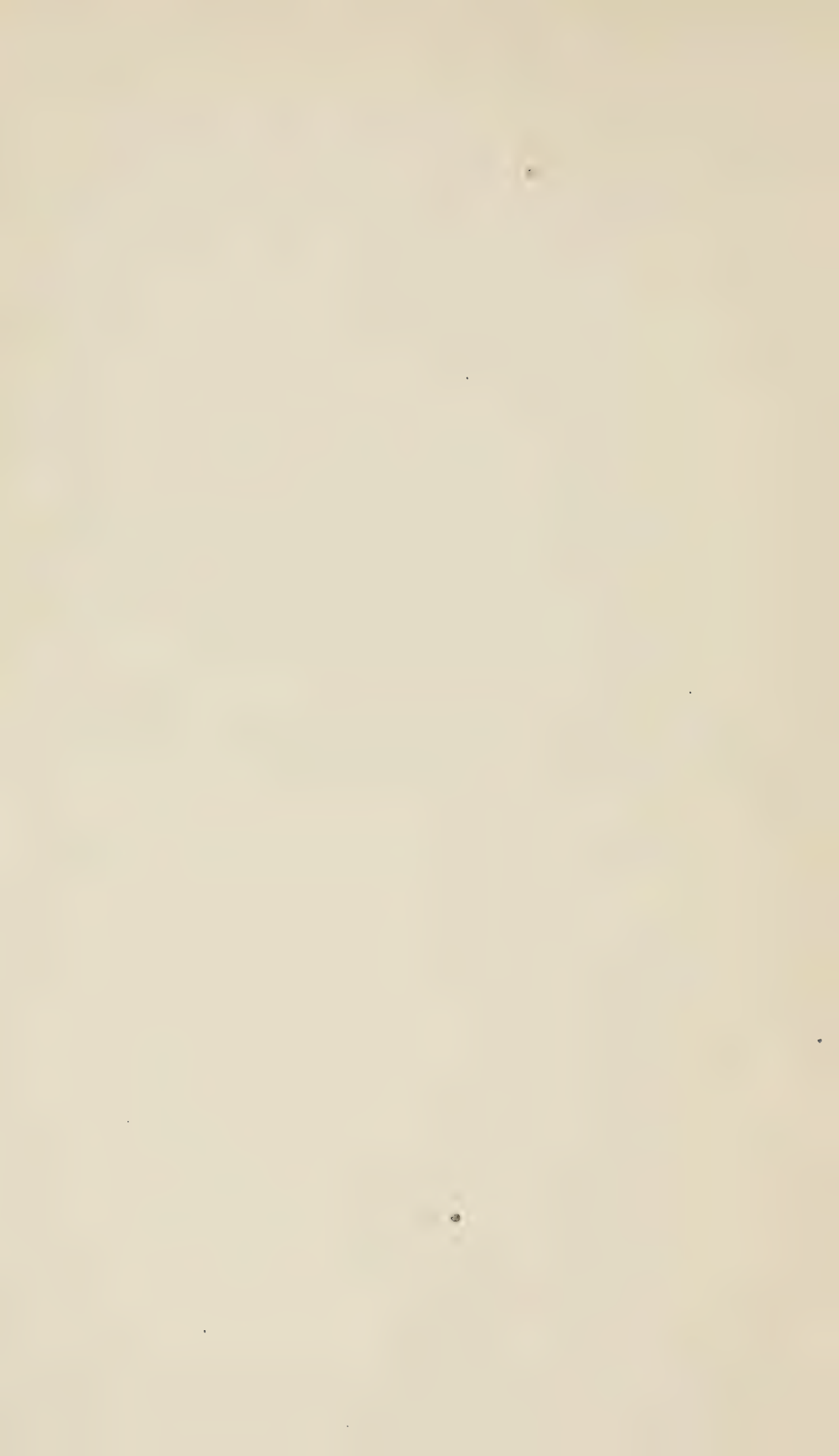


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PART I.

THE PUBLISHED WRITINGS OF FIELDING BRADFORD MEEK.

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## 1.—THE PUBLISHED WRITINGS OF FIELDING BRADFORD MEEK.

### BIOGRAPHIC SKETCH OF FIELDING BRADFORD MEEK.\*

On December 10, 1817, Fielding Bradford Meek was born in the city of Madison, Ind. His grandparents were Irish Presbyterians, who removed from Armagh County to America about 1768, and who finally settled in Hamilton County, Ohio. His father, together with his family, removed from there to Madison, where he was a lawyer of considerable eminence. The family, including those born in Madison, consisted of the parents, two sons and two daughters besides Fielding, all of whom died several years before him. The father died when the son who was to become so distinguished a paleontologist was only three years old, leaving the family in moderate circumstances. Mr. Meek's early youth was passed in Madison. His education was much impeded by the delicate condition of his health. Upon reaching manhood, by advice of his friends and against his own inclination, for he was of a studious and retiring disposition, he invested his small patrimony in mercantile business, first in his native place, and afterward in Owensborough, Ky. The result was financial failure and loss of all he possessed. After this, while laboring for his support and struggling with ill health and poverty, he continued his studies, general and special, for he began early to devote himself to natural history. His first public work was during the years 1848 and 1849, and was performed, as an assistant of Dr. D. D. Owen, upon the United States geological survey of Iowa, Wisconsin, and Minnesota.

Having closed this work, he returned to his home in Owensborough, but soon after, in the year 1852, went to Albany, N. Y., as assistant to Professor Hall, in the paleontologic work of that State. He remained there until 1858, serving three summers. Two of these summers were spent on the geologic survey of Missouri; the other, that of 1853, was employed in exploring the Bad Lands of Nebraska, together with Dr. F. V. Hayden, both being commissioned by Professor Hall for that work. Three

\* This sketch is compiled from data taken down at Mr. Meek's dictation by a friend shortly before his death.

years after this exploration, he prepared for publication, in conjunction with Professor Hall, an important memoir on cretaceous fossils from Nebraska. In 1858, Mr. Meek left Albany and took up his residence in Washington, where he continued to live until his death. His home, and the place of his scientific work, except when in the field, was at the Smithsonian Institution, and it was within its walls that the greatest part of his scientific work was accomplished. The association which he formed with Dr. Hayden in 1853 was tacitly continued until Mr. Meek's death. When Dr. Hayden commenced his explorations in the Western Territories, and afterwards organized the Geological Survey of the Rocky Mountain region, Mr. Meek was entrusted with all the invertebrate paleontology, much of which appeared under their joint names. It was the custom of Mr. Meek to publish preliminary descriptions of his new species, and afterward elaborate and illustrate the subjects for final publication. Thoroughness, scrupulous exactness, and nice powers of discrimination are manifested in all his labors; and with such merits his works will shed luster upon his name as long as paleontology is studied. No one in America has done more than he to systematize and advance the science to which he devoted his life. His personal character cannot be too highly eulogized, for it was without a blemish. He was a genial, sincere, pure-minded, honorable man. Gentleness and candor were apparent in every expression of his face, and in every word he uttered; but he was self-reliant and ready at all times to defend what he believed to be right, and with his keen sense of justice, he was seldom mistaken as to what was right. He was never in vigorous health and often ill; but never complaining, always hopeful, always cheerful, always at the work he loved so well, always helpful of others. His hearing began to fail in early manhood, and the affliction increased until he became entirely deaf several years before he died. Even when cut off from conversation with his fellow-men his cheerfulness did not forsake him; but he seemed to derive great pleasure from written communication with his friends. He was never married, and leaves no near relatives; but all with whom he was ever brought in contact will remember him with pleasure, while to those who were permitted to enjoy scientific intercourse or correspondence with him during his life, his memory will be especially dear. He died at Washington, D. C., on the 21st of December, 1876, having only a few days before completed his 59th year. He had been in ill health for several years past, and indeed almost all his life, for his malady was inherited *phthisis pulmonalis*. It had been his custom for several years to spend the winter in Florida, and the summer months in the Alleghany Mountains. He had made preparations to leave Washington for Florida early in December, but was taken with hemorrhage of the lungs on the day before the one set for his departure. He never rallied from this attack, but gradually sank to a peaceful and quiet death.

I.

MEEK, F. B. Mr. Meek's report on Moniteau County. <The first and second annual reports of the geological survey of Missouri, by G. C. Swallow, State geologist. Part II. pp.96-117. Jefferson City, 1855.

CONTENTS OF THE REPORT.

|                                                                                                                                             | Page. |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Quaternary deposits .....                                                                                                                   | 96    |
| Carboniferous system.—Encrinital limestone .....                                                                                            | 98    |
| Chemung group .....                                                                                                                         | 101   |
| Devonian system.—Upper Helderberg.—Onondaga limestone .....                                                                                 | 103   |
| Lower Silurian strata:                                                                                                                      |       |
| Saccaroidal sandstone .....                                                                                                                 | 105   |
| Second magnesian limestone .....                                                                                                            | 106   |
| Economical geology:                                                                                                                         |       |
| Soil .....                                                                                                                                  | 109   |
| Building stones .....                                                                                                                       | 110   |
| Fire-stones, limestones for lime .....                                                                                                      | 110   |
| Sand for making mortar, hydraulic limestone, millstones, materials for the construction of roads, clays for the manufacture of bricks ..... | 111   |
| Coal .....                                                                                                                                  | 112   |
| Iron ore .....                                                                                                                              | 115   |
| Lead .....                                                                                                                                  | 115   |
| High-Point Mine .....                                                                                                                       | 117   |

Mr. Meek also drew the figures illustrating the paleontological report in this volume. A geological map of the county is also given.

2.

HALL, JAMES, and MEEK, F. B. Descriptions of new species of fossils from the Cretaceous formations of Nebraska; with observations upon *Baculites ovatus* and *B. compressus*, and the progressive development of the septa in *Baculites*, *Ammonites*, and *Scaphites*. <Mem. Am. Acad. Arts and Sci., vol. v, new ser., pp. 379-411, 8 plates. 1856. Cambridge, 1856.

The fossils described in this paper were collected in 1853 by F. B. Meek and F. V. Hayden. The paper was communicated June 27, 1854, but was not published till 1856.

|                                                                                                       | Page.   |
|-------------------------------------------------------------------------------------------------------|---------|
| <i>Callianassa danai</i> , n. s., H. & M., 1856, pl. i, fig. 1 <i>a, b</i> .....                      | 379-380 |
| <i>Lingula subspatulata</i> , n. s., H. & M., 1856, pl. i, figs. 2 <i>a, b</i> .....                  | 380     |
| <i>Caprinella coralloidea</i> , n. s., H. & M., 1856, pl. ii, figs. 3 <i>a-f</i> .....                | 380-381 |
| <i>Pecten rigida</i> , n. s., H. & M., 1856, pl. ii, figs. 4 <i>a-c</i> .....                         | 381     |
| <i>Aricula haydeni</i> , n. s., H. & M., 1856, pl. i, figs. 5 <i>a, b</i> .....                       | 382     |
| <i>Lucina subundata</i> , n. s., H. & M., 1856, pl. i, figs. 6 <i>a, b</i> .....                      | 382     |
| <i>Cythera orbiculata</i> , n. s., H. & M., 1856, pl. i, fig. 7 .....                                 | 382-383 |
| <i>Cythera tenuis</i> , n. s., H. & M., 1856, pl. i, figs. 8 <i>a-c</i> .....                         | 383     |
| <i>Crassatella evansii</i> , n. s., H. & M., 1856, pl. i, figs. 9 <i>a-c</i> .....                    | 383-384 |
| <i>Pectunculus siouxensis</i> , n. s., H. & M., 1856, pl. i, fig. 12 .....                            | 384     |
| <i>Nucula subnatisi</i> , n. s., H. & M., 1856, pl. i, figs. 10 <i>a-c</i> .....                      | 384-385 |
| <i>Nucula ventricosa</i> , n. s., H. & M., 1856, pl. i, fig. 11 <i>a, b</i> .....                     | 385     |
| <i>Capulus occidentalis</i> , n. s., H. & M., 1856, pl. i, fig. 13 <i>a-d</i> .....                   | 385-386 |
| <i>Inoceramus sublaevis</i> , n. s., H. & M., 1856, pl. ii, fig. 1 <i>a, b</i> .....                  | 386     |
| <i>Inoceramus concavus</i> , n. s., H. & M., 1856, pl. ii, fig. 2 <i>a, b</i> .....                   | 386-387 |
| <i>Inoceramus tenuilineatus</i> , n. s., H. & M., 1856, pl. ii, fig. 3 <i>a, b</i> .....              | 387     |
| <i>Inoceramus conradi</i> , n. s., H. & M., 1856, pl. ii, fig. 5 <i>a, b</i> .....                    | 387-388 |
| <i>Inoceramus fragilis</i> , n. s., H. & M., 1856, pl. ii, figs. 6 <i>a, b</i> .....                  | 388     |
| <i>Natica obliquata</i> , n. s., H. & M., 1856, pl. iii, figs. 1 <i>a, b</i> .....                    | 389     |
| <i>Natica concinna</i> , n. s., H. & M., 1856, pl. iii, figs. 2 <i>a-d</i> .....                      | 389     |
| <i>Natica paludiformis</i> , n. s., H. & M., 1856, pl. iii, fig. 3 <i>a-c</i> .....                   | 389-390 |
| <i>Acteon concinax</i> , n. s., H. & M., 1856, pl. iii, figs. 4 <i>a-d</i> .....                      | 390     |
| <i>Buccinum? vinculum</i> , n. s., H. & M., 1856, pl. iii, figs. 5 <i>a-b</i> .....                   | 390-391 |
| <i>Fusus shumardii</i> , n. s., H. & M., 1856, pl. iii, figs. 6 <i>a-c</i> .....                      | 391     |
| <i>Fusus constrictus</i> , n. s., H. & M., 1856, pl. iii, figs. 7 <i>a-d</i> .....                    | 391-392 |
| <i>Fusus? tenuilineata</i> , n. s., H. & M., 1856, pl. iii, figs. 8 <i>a-c</i> and 9 <i>a-c</i> ..... | 392     |
| <i>Rostellaria fusiformis</i> , n. s., H. & M., 1856, pl. iii, fig. 10 <i>a, b</i> .....              | 393     |
| <i>Dentalium gracile</i> , n. s., H. & M., 1856, pl. iii, fig. 11 <i>a-c</i> .....                    | 393     |

|                                                                                                            | Page.   |
|------------------------------------------------------------------------------------------------------------|---------|
| <i>Helix leidyi</i> n. s., H. & M., 1856, pl. iii, fig. 12 a, b                                            | 394     |
| <i>Ammonites complexus</i> , n. s., H. & M., 1856, pl. iv, fig. 1 a-f                                      | 394-395 |
| <i>Ammonites perrinatius</i> , n. s., H. & M., 1856, pl. iv, fig. 2 a-c                                    | 396     |
| <i>Hamites mortoni</i> , n. s., H. & M., 1856, pl. iv, figs. 3 a-c                                         | 396-397 |
| <i>Ancyloceras? nicolletii</i> , n. s., H. & M., 1856, pl. iv, fig. 4                                      | 397-398 |
| <i>Baculites oratus</i> and <i>B. compressus</i> , Say                                                     | 398-399 |
| <i>Baculites oratus</i> , Say, pl. v, fig. 1, a-c; pl. vi, figs. 1-7                                       | 399-400 |
| <i>Baculites compressus</i> , Say, pl. v, figs. 2 a-b; pl. vi, figs. 8-9                                   | 400-402 |
| <i>Baculites grandis</i> , n. s., H. & M., 1856, pl. vii, fig. 1, 2; pl. viii, figs. 1, 2; pl. vi, fig. 10 | 402-403 |

The same paper contains—

|                                                                                                                                    |     |
|------------------------------------------------------------------------------------------------------------------------------------|-----|
| "Section of the members of the Cretaceous formation as observed on the Missouri River, and thence westward to the Mauvaises Terres | 405 |
| List of fossils heretofore identified and described from the Cretaceous formation of Nebraska                                      | 405 |
| List of species common to the Cretaceous formations of Nebraska and New Jersey                                                     | 406 |
| List of the new species of fossils described in the preceding paper                                                                | 406 |
| In the additions and corrections                                                                                                   | 411 |
| <i>Fusus constrictus</i> is referred to the genus <i>Buccinum</i> .                                                                |     |
| <i>Hamites mortoni</i> is regarded as belonging to the genus <i>Ancyloceras</i> as defined by Pictet.                              |     |

### 3.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Gasteropoda, from the Cretaceous formation of Nebraska Territory. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 63-69. 1856. Philadelphia, 1857.

|                                                       | Page. |
|-------------------------------------------------------|-------|
| <i>Scalaria cerethiformis</i> , n. s., M. & H., 1856  | 63    |
| <i>Acteon subellipticus</i> , n. s., M. & H., 1856    | 63-64 |
| <i>Avalana subglobosa</i> , n. s., M. & H., 1856      | 64    |
| <i>Natica? ambigua</i> , n. s., M. & H., 1856         | 64    |
| <i>Natica occidentalis</i> , n. s., M. & H., 1856     | 64    |
| <i>Natica moreauensis</i> , n. s., M. & H., 1856      | 64    |
| <i>Turbo nebrascensis</i> , n. s., M. & H., 1856      | 64    |
| <i>Turbo tenuilineatus</i> , n. s., M. & H., 1856     | 64-65 |
| <i>Restellaria biangulata</i> , n. s., M. & H., 1856  | 65    |
| <i>Fusus dakotensis</i> , n. s., M. & H., 1856        | 65    |
| <i>Fusus galpinianus</i> , n. s., M. & H., 1856       | 65    |
| <i>Fusus contortus</i> , n. s., M. & H., 1856         | 65    |
| <i>Fusus culbertsoni</i> , n. s., M. & H., 1856       | 66    |
| <i>Fusus flexuocostatus</i> , n. s., M. & H., 1856    | 66    |
| <i>Fusus neuberrei</i> , n. s., M. & H., 1856         | 66    |
| <i>Pyrrula bairdi</i> , n. s., M. & H., 1856          | 66    |
| <i>Fasciolaria cretacea</i> , n. s., M. & H., 1856    | 66-67 |
| <i>Fasciolaria buccinoides</i> , n. s., M. & H., 1856 | 67    |
| <i>Buccinum? nebrascensis</i> , n. s., M. & H., 1856  | 67    |
| <i>Cupulus fragilis</i> , n. s., M. & H., 1856        | 68    |
| <i>Helcion</i> , Montfort                             | 68    |
| <i>Helcion sexsulcatus</i> , n. s., M. & H., 1856     | 68    |
| <i>Helcion patelliformis</i> , n. s., M. & H., 1856   | 68    |
| <i>Helcion alveolus</i> , n. s., M. & H., 1856        | 68    |
| <i>Helcion suberatus</i> , n. s., M. & H., 1856       | 68    |
| <i>Helcion carinatus</i> , n. s., M. & H., 1856       | 68-69 |
| <i>Dentalium fragilis</i> , n. s., M. & H., 1856      | 69    |
| <i>Bulla volvaria</i> , n. s., M. & H., 1856          | 69    |
| <i>Bulla minor</i> , n. s., M. & H., 1856             | 69    |
| <i>Bulla occidentalis</i> , n. s., M. & H., 1856      | 69    |

### 4.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Gasteropoda and Cephalopoda, from the Cretaceous formations of Nebraska Territory. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 70-72. 1856. Philadelphia, 1857.

|                                                  | Page |
|--------------------------------------------------|------|
| <i>Facella? laevigata</i> , n. s., M. & H., 1857 | 70   |
| <i>Facella? laevigata</i> , n. s., M. & H., 1857 | 70   |



|                                                               | Page. |
|---------------------------------------------------------------|-------|
| <i>Belemnitella? bulbosa</i> , n. s., M. & H., 1857 .....     | 70    |
| <i>Ammonites halli</i> , n. s., M. & H., 1857 .....           | 70-71 |
| <i>Ancylorthis? nobrascensis</i> , n. s., M. & H., 1857 ..... | 71    |
| <i>Ancylorthis? cheyensis</i> , n. s., M. & H., 1857 .....    | 71-72 |

5,

MEEK, F. B., and HAYDEN, F. V. Descriptions of twenty-eight new species of Acephala and one Gasteropod, from the Cretaceous formations of Nebraska Territory.  
<Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 81-87. 1856. Philadelphia, 1857.

|                                                              | Page. |
|--------------------------------------------------------------|-------|
| <i>Pholadomya undata</i> , n. s., M. & H., 1856 .....        | 81    |
| <i>Goniomya americana</i> , n. s., M. & H., 1856 .....       | 81-82 |
| <i>Solen subplicatus</i> , n. s., M. & H., 1856 .....        | 82    |
| <i>Tellina gracilis</i> , n. s., M. & H., 1856 .....         | 82    |
| <i>Tellina equilateralis</i> , n. s., M. & H., 1856 .....    | 82    |
| <i>Tellina? cheyensis</i> , n. s., M. & H., 1856 .....       | 82    |
| <i>Tellina scitula</i> , n. s., M. & H., 1856 .....          | 82    |
| <i>Tellina subelliptica</i> , n. s., M. & H., 1856 .....     | 82    |
| <i>Tellina prouti</i> , n. s., M. & H., 1856 .....           | 82    |
| <i>Cytherea doweyi</i> , n. s., M. & H., 1856 .....          | 83    |
| <i>Cytherea nebrascensis</i> , n. s., M. & H., 1856 .....    | 83    |
| <i>Corbula ventricosa</i> , n. s., M. & H., 1856 .....       | 83    |
| <i>Corbula moreauensis</i> , n. s., M. & H., 1856 .....      | 83-84 |
| <i>Corbula? gregaria</i> , n. s., M. & H., 1856 .....        | 84    |
| <i>Astarte gregaria</i> , n. s., M. & H., 1856 .....         | 84    |
| <i>Nucula scitula</i> , n. s., M. & H., 1856 .....           | 84    |
| <i>Nucula evansi</i> , n. s., M. & H., 1856 .....            | 84    |
| <i>Nucula equilateralis</i> , n. s., M. & H., 1856 .....     | 84-85 |
| <i>Nucula subplana</i> , n. s., M. & H., 1856 .....          | 85    |
| <i>Nucula cancellata</i> , n. s., M. & H., 1856 .....        | 85    |
| <i>Nucula planomarginata</i> , n. s., M. & H., 1856 .....    | 85    |
| <i>Pectunculina parvula</i> , n. s., M. & H., 1856 .....     | 85    |
| <i>Arca (Oucullæa) cordata</i> , n. s., M. & H., 1856 .....  | 86    |
| <i>Arca (Oucullæa) shumardi</i> , n. s., M. & H., 1856 ..... | 86    |
| <i>Mytilus attenuatus</i> , n. s., M. & H., 1856 .....       | 86    |
| <i>Aricula? fibrosa</i> , n. s., M. & H., 1856 .....         | 86-87 |
| <i>Inoceramus ventricosus</i> , n. s., M. & H., 1856 .....   | 87    |
| <i>Pecten nebrascensis</i> , n. s., M. & H., 1856 .....      | 87    |
| <i>Natica suberassa</i> , n. s., M. & H., 1856 .....         | 87    |

6.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species of Acephala and Gasteropoda, from the Tertiary formations of Nebraska Territory; with some general remarks on the geology of the country about the sources of the Missouri River.  
<Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 111-126. 1856. Philadelphia, 1857.

|                                                                    | Page.   |
|--------------------------------------------------------------------|---------|
| Formations immediately beneath the Tertiary in this district ..... | 113     |
| Formations at the base of the Cretaceous of this district .....    | 114     |
| <i>Cyclas formosa</i> , n. s., M. & H., 1856 .....                 | 115     |
| <i>Cyclas fragilis</i> , n. s., M. & H., 1856 .....                | 115     |
| <i>Cyclas subellipticus</i> , n. s., M. & H., 1856 .....           | 115     |
| <i>Cyrena moreauensis</i> , n. s., M. & H., 1856 .....             | 115-116 |
| <i>Cyrena intermedia</i> , n. s., M. & H., 1856 .....              | 116     |
| <i>Cyrena occidentalis</i> , n. s., M. & H., 1856 .....            | 116     |
| <i>Corbula subtrigonalis</i> , n. s., M. & H., 1856 .....          | 116     |
| <i>Corbula perundata</i> , n. s., M. & H., 1856 .....              | 116     |
| <i>Corbula mactriformis</i> , n. s., M. & H., 1856 .....           | 117     |
| <i>Unio priscus</i> , n. s., M. & H., 1856 .....                   | 117     |
| <i>Bulinus? teres</i> , n. s., M. & H., 1856 .....                 | 117-118 |
| <i>Bulinus? vermiculus</i> , n. s., M. & H., 1856 .....            | 118     |



|                                                               | Page.   |
|---------------------------------------------------------------|---------|
| <i>Bulinus linnaeaformis</i> , n. s., M. & H., 1856 .....     | 118     |
| <i>Bulinus nebrascensis</i> , n. s., M. & H., 1856 .....      | 118     |
| <i>Pupa helicoides</i> , n. s., M. & H., 1856 .....           | 118-119 |
| <i>Linnaea tenuicosta</i> , n. s., M. & H., 1856 .....        | 119     |
| <i>Physa laqueuscula</i> , n. s., M. & H., 1856 .....         | 119     |
| <i>Physa rhomboidea</i> , n. s., M. & H., 1856 .....          | 119     |
| <i>Physa nebrascensis</i> , n. s., M. & H., 1856 .....        | 119-120 |
| <i>Physa subelongata</i> , n. s., M. & H., 1856 .....         | 120     |
| <i>Planorbis subantennatus</i> , n. s., M. & H., 1856 .....   | 120     |
| <i>Planorbis concentus</i> , n. s., M. & H., 1856 .....       | 120     |
| <i>Velletia (Ancylos) minuta</i> , n. s., M. & H., 1856 ..... | 120     |
| <i>Paludina multilineata</i> , n. s., M. & H., 1856 .....     | 120-121 |
| <i>Paludina retata</i> , n. s., M. & H., 1856 .....           | 121     |
| <i>Paludina leai</i> , n. s., M. & H., 1856 .....             | 121-122 |
| <i>Paludina retusa</i> , n. s., M. & H., 1856 .....           | 122     |
| <i>Paludina conradi</i> , n. s., M. & H., 1856 .....          | 122     |
| <i>Paludina peculiaris</i> , n. s., M. & H., 1856 .....       | 122     |
| <i>Paludina trochiformis</i> , n. s., M. & H., 1856 .....     | 122-123 |
| <i>Paludina leidyi</i> , n. s., M. & H., 1856 .....           | 123     |
| <i>Valcata parvula</i> , n. s., M. & H., 1856 .....           | 123     |
| <i>Melania minutula</i> , n. s., M. & H., 1856 .....          | 123-124 |
| <i>Melania anthonyi</i> , n. s., M. & H., 1856 .....          | 124     |
| <i>Melania multistriata</i> , n. s., M. & H., 1856 .....      | 124     |
| <i>Melania nebrascensis</i> , n. s., M. & H., 1856 .....      | 124-125 |
| <i>Melania conessa</i> , n. s., M. & H., 1856 .....           | 125     |
| <i>Cerithium nebrascensis</i> , n. s., M. & H., 1856 .....    | 125     |

On page 126 *Pyrula bairdi* is changed to *Busycon* (Bolten), and called *B. bairdi*.

## 7.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new fossil species of Mollusca collected by Dr. F. V. Hayden in Nebraska Territory, together with a complete catalogue of all the remains of Invertebrata hitherto described and identified from the Cretaceous and Tertiary formations of that region. <Proc. Acad. Nat. Sci. Phila., vol. viii, pp. 265-286. 1856. Philadelphia, 1857.

|                                                                                                                                                             | Page.   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Vertical section of the geological formation of Nebraska Territory, so far as determined .....                                                              | 269     |
| <i>Natica tuomyana</i> , n. s., M. & H., 1856 .....                                                                                                         | 270     |
| <i>Bolla subcylindrica</i> , n. s., M. & H., 1856 .....                                                                                                     | 270     |
| <i>Panopæa occidentalis</i> , n. s., M. & H., 1856 .....                                                                                                    | 270     |
| <i>Maetra formosa</i> , n. s., M. & H., 1856 .....                                                                                                          | 271     |
| <i>Maetra warrenana</i> , n. s., M. & H., 1856 .....                                                                                                        | 271     |
| <i>Maetra alta</i> , n. s., M. & H., 1856 .....                                                                                                             | 271-272 |
| <i>Tellina subtoruosa</i> , n. s., M. & H., 1856 .....                                                                                                      | 272     |
| <i>Venus ? circularis</i> , n. s., M. & H., 1856 .....                                                                                                      | 272     |
| <i>Cytherea pellucida</i> , n. s., M. & H., 1856 .....                                                                                                      | 272-273 |
| <i>Cytherea conchata</i> , n. s., M. & H., 1856 .....                                                                                                       | 273     |
| <i>Lucina occidentalis</i> , n. s., M. & H., 1856 .....                                                                                                     | 273-274 |
| <i>Hettangia americana</i> , n. s., M. & H., 1856 .....                                                                                                     | 274     |
| <i>Cardium speciosum</i> , n. s., M. & H., 1856 .....                                                                                                       | 274-275 |
| <i>Nucula obsoletastriata</i> , n. s., M. & H., 1856 .....                                                                                                  | 275     |
| <i>C. obsoletastriata</i> , n. s., M. & H., 1856 .....                                                                                                      | 275-276 |
| <i>Mytilus subarcuatus</i> , n. s., M. & H., 1856 .....                                                                                                     | 276     |
| <i>Gervilla subtoruosa</i> , n. s., M. & H., 1856 .....                                                                                                     | 276     |
| <i>Inoceramus pertenuis</i> , n. s., M. & H., 1856 .....                                                                                                    | 276-277 |
| <i>Inoceramus incurvus</i> , n. s., M. & H., 1856 .....                                                                                                     | 277     |
| <i>Ostrea patina</i> , n. s., M. & H., 1856 .....                                                                                                           | 277     |
| Catalogue of all the invertebrate fossil remains hitherto described and identified, from the Tertiary and Cretaceous formations of Nebraska Territory ..... | 278     |
| Tertiary species .....                                                                                                                                      | 278     |
| Cretaceous species .....                                                                                                                                    | 280     |

8.

MEEK, F. B. Description of new organic remains from the Cretaceous rocks of Vancouver's Island. <Trans. Albany Inst., vol. iv, pp. 37-49. 1857. Albany, 1858-1864.

The fossils here described were collected by Dr. J. S. Newberry, geologist of Lieutenant Williamson's North California and Oregon Exploring Expedition. The author describes twelve new species.

|                                                                                 | Page. |
|---------------------------------------------------------------------------------|-------|
| <i>Nucula traskana</i> , n. s., Meek, 1857 .....                                | 39    |
| <i>Arca</i> ( <i>Cucullea</i> ) <i>equilateralis</i> , n. s., Meek, 1857.....   | 39-40 |
| <i>Arca vancouverensis</i> , n. s., Meek, 1857.....                             | 40    |
| <i>Cardium scitulum</i> , n. s., Meek, 1857.....                                | 40-41 |
| <i>Ph[oladomya</i> ( <i>Goniomya</i> ) <i>borealis</i> , n. s., Meek, 1857..... | 41-42 |
| <i>Ph[oladomya subelongata</i> , n. s., Meek, 1857.....                         | 42    |
| <i>Trigonia ecansana</i> , n. s., Meek, 1857.....                               | 43    |
| <i>Thracia?</i> <i>occidentalis</i> , n. s., Meek, 1857.....                    | 43-44 |
| <i>Thracia?</i> <i>subtruncata</i> , n. s., Meek, 1857.....                     | 44    |
| <i>Dentalium nanaimoensis</i> , n. s., Meek, 1857.....                          | 44-45 |
| <i>Ammonites</i> ( <i>Scaphites?</i> ) <i>ramosus</i> , n. s., Meek, 1857.....  | 45-47 |
| <i>Ammonites newberryanus</i> , n. s., Meek, 1857.....                          | 47-48 |
| <i>Baculites ovatus?</i> (Say).....                                             | 48-49 |

Mr. Meek gives the date of these species as 1857 when he republished them with illustrations in the Bull. U. S. Geol. and Geogr. Surv. Terr., vol. ii, No. 4. Washington, 1876.

9.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new species and genera of fossils collected by Dr. F. V. Hayden in Nebraska Territory, under the direction of Lieut. G. K. Warren, U. S. Topographical Engineers; with some remarks on the Tertiary and Cretaceous formations of the Northwest and the parallelism of the latter with those of other portions of the United States and Territories. <Proc. Acad. Nat. Sci. Phila., 1st series, vol. ix, pp. 117-148. 1857. Philadelphia, 1858.

Genera *Pseudobuccinum*, *Corbulamella*.

|                                                                                                                      | Page.   |
|----------------------------------------------------------------------------------------------------------------------|---------|
| Gives a brief account of the results of previous explorations.....                                                   | 117-121 |
| Section of Tertiary beds thirteen miles above Fort Clark.....                                                        | 122     |
| Section of fresh-water and estuary deposits near the mouth of Judith River.....                                      | 124     |
| Section of the older deposits at the mouth of Judith River, in the descending order...                               | 125     |
| Alabama section, from facts communicated by Prof. A. Winchell.....                                                   | 126     |
| New Jersey section, compiled from the reports of that State.....                                                     | 127     |
| Vertical section of the geological formations of Nebraska Territory, so far as determined.....                       | 128     |
| Sections of the rocks in Northeastern Kansas (above the Coal Measures). By Major F. Hawn, U. S. deputy surveyor..... | 130     |
| Section of the formations at Pyramid Mountain, New Mexico [by Jules Marcou]....                                      | 132     |
| Conclusions.....                                                                                                     | 133     |
| <i>Ptychoceras mortoni</i> , n. s., M. & H., 1857.....                                                               | 134     |
| <i>Serpula?</i> <i>tennicarinatus</i> , n. s., M. & H., 1857.....                                                    | 134     |
| <i>Vitrina obliqua</i> , n. s., M. & H., 1857.....                                                                   | 134     |
| <i>Helix occidentalis</i> , n. s., M. & H., 1857.....                                                                | 135     |
| <i>Helix vitrinoides</i> , n. s., M. & H., 1857.....                                                                 | 135     |
| <i>Planorbis tenuirostris</i> , n. s., M. & H., 1857.....                                                            | 135     |
| <i>Planorbis amplexus</i> , n. s., M. & H., 1857.....                                                                | 135-136 |
| <i>Planorbis fragilis</i> , n. s., M. & H., 1857.....                                                                | 136     |
| <i>Melania subtruncata</i> , n. s., M. & H., 1857.....                                                               | 136     |
| <i>Melania omitta</i> , n. s., M. & H., 1857.....                                                                    | 136     |
| <i>Melania sublaevis</i> , n. s., M. & H., 1857.....                                                                 | 136-137 |
| <i>Melania invenusta</i> , n. s., M. & H., 1857.....                                                                 | 137     |
| <i>Melania warrenana</i> , n. s., M. & H., 1857.....                                                                 | 137     |
| <i>Melania tennicarinata</i> , n. s., M. & H., 1857.....                                                             | 137-138 |
| <i>Melania convexa</i> , M. & H.....                                                                                 | 138     |
| <i>Fusus vaughani</i> , n. s., M. & H., 1857.....                                                                    | 138-139 |
| <i>Fusus subtruncatus</i> , n. s., M. & H., 1857.....                                                                | 139     |

|                                                                                      | Page.   |
|--------------------------------------------------------------------------------------|---------|
| <i>Fusus intertextus</i> , n. s., M. & H., 1857 .....                                | 139     |
| <i>Fusus</i> ( <i>Pleurotoma</i> ?) <i>scarboroughi</i> , n. s., M. & H., 1857 ..... | 139-140 |
| <i>Pseudobuccinum</i> , n. g., M. & H., 1857 .....                                   | 140     |
| <i>Pseudobuccinum nebrascensis</i> , M. & H. ....                                    | 140-141 |
| <i>Xylophaga elegantula</i> , n. s., M. H., 1857 .....                               | 141     |
| <i>Xylophaga stimpsoni</i> , n. s., M. & H., 1857 .....                              | 141-142 |
| <i>Pholadomya subventricosa</i> , n. s., M. & H., 1857 .....                         | 142     |
| <i>Solen</i> ? <i>dakotensis</i> , n. s., M. & H., 1857 .....                        | 142     |
| <i>Corbulamella</i> , n. g., M. & H., 1857 .....                                     | 142-143 |
| <i>Corbulamella gregarea</i> , M. & H. ....                                          | 143     |
| <i>Cyprina arenaria</i> , n. s., M. & H., 1857 .....                                 | 143     |
| <i>Cyprina cordata</i> , n. s., M. & H., 1857 .....                                  | 143     |
| <i>Cyprina compressa</i> , n. s., M. & H., 1857 .....                                | 144     |
| <i>Cyprina subtemida</i> , n. s., M. & H., 1857 .....                                | 144     |
| <i>Cyprina ovata</i> , n. s., M. & H., 1857 .....                                    | 144     |
| <i>Unio dani</i> , n. s., M. & H., 1857 .....                                        | 145     |
| <i>Unio deweyanus</i> , n. s., M. & H., 1857 .....                                   | 145-146 |
| <i>Unio subspatulata</i> , n. s., M. & H., 1857 .....                                | 146     |
| <i>Pectunculus subimbricatus</i> , n. s., M. & H., 1857 .....                        | 146     |
| <i>Ostrea glabra</i> , n. s., M. & H., 1857 .....                                    | 146-147 |
| <i>Ostrea translucida</i> , n. s., M. & H., 1857 .....                               | 147     |
| <i>Hemiaster</i> ? <i>humphreysanus</i> , n. s., M. & H., 1857 .....                 | 147-148 |

## 10.

MEEK, F. B., and HAYDEN, F. V. Fossils of Nebraska. Letter from F. B. Meek and F. V. Hayden to G. K. Warren, Lieut. Topog. Eng., dated Washington February 8, 1858; printed in the National Intelligencer of March 16. <Am. Journ. Sci., vol. xxv, 2d ser., pp. 439-442. New Haven, 1858.

This article is mainly geologic, only the genera, which characterize the formations under discussion, being enumerated.

## 11.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains collected in Nebraska Territory, in the year 1857, by Dr. F. V. Hayden, geologist to the exploring expedition under the command of Lieut. G. K. Warren, Top. Eng., U. S. Army; together with some remarks on the geology of the Black Hills and portions of the surrounding country. <Proc. Acad. Nat. Sci. Phila., vol. x, pp. 41-59. 1858. Philadelphia, 1859.

Jurassic fossils. Afterward republished and illustrated, in 1865, in Paleontology of the Upper Missouri, Smithsonian Contributions to Knowledge, 172.

|                                                                                                  | Page. |
|--------------------------------------------------------------------------------------------------|-------|
| General section of the geological formations seen in and near the Black Hills (descending) ..... | 43-44 |
| Carboniferous rocks of the Black Hills .....                                                     | 47    |
| Lower Silurian .....                                                                             | 49    |
| Potsdam sand-stone .....                                                                         | 49    |
| Metamorphic and igneous rocks .....                                                              | 49    |
| <i>Pentacrinus astericus</i> , n. s., M. & H., 1858 .....                                        | 49-50 |
| <i> Lingula brevis</i> , n. s., M. & H., 1858 .....                                              | 50    |
| <i>Inoceramus umbonatus</i> , n. s., M. & H., 1858 .....                                         | 50    |
| <i>Avicula</i> ( <i>Monotis</i> ) <i>tenuicostata</i> , n. s., M. & H., 1858 .....               | 50-51 |
| <i>Mytilus pertenuis</i> , n. s., M. & H., 1858 .....                                            | 51    |
| <i>Arca</i> ( <i>Cucullaea</i> ) <i>inornata</i> , n. s., M. & H., 1858 .....                    | 51    |
| <i>Unio nivalis</i> , n. s., M. & H., 1858 .....                                                 | 52    |
| <i>Corbula inornata</i> , n. s., M. & H., 1858 .....                                             | 52    |
| <i>Panopaea</i> ( <i>Myacites</i> ) <i>subelliptica</i> , n. s., M. & H., 1858 .....             | 52-53 |
| <i>Teredo globosa</i> , n. s., M. & H., 1858 .....                                               | 53    |
| <i>Pholus cuneata</i> , n. s., M. & H., 1858 .....                                               | 53    |
| <i>Aceon</i> ( <i>Solidula</i> ) <i>attenuata</i> , n. s., M. & H., 1858 .....                   | 54    |
| <i>Helicoceras</i> ? <i>tortus</i> , n. s., M. & H., 1858 .....                                  | 54-55 |
| <i>Turritiles</i> ( <i>Helicoceras</i> ) <i>cochleatus</i> , n. s., M. & H., 1858 .....          | 55-56 |
| <i>Turritiles</i> ? <i>umbilicatus</i> , n. s., M. & H., 1858 .....                              | 56    |



|                                                                | Page. |
|----------------------------------------------------------------|-------|
| <i>Helicoceras tenuicostatus</i> , n. s., M. & H., 1858 .....  | 56    |
| <i>Ancyloceras (Hamites) uncus</i> , n. s., M. & H., 1858..... | 56-57 |
| <i>Ammonites cordiformis</i> , n. s., M. & H., 1858.....       | 57    |
| <i>Ammonites henryi</i> , n. s., M. & H., 1858.....            | 57-58 |
| <i>Scaphites larvaformis</i> , n. s., M. & H., 1858 .....      | 58    |
| <i>Belemnites densus</i> , n. s., M. & H., 1858 .....          | 58-59 |

12.

MEEK, F. B., and HAYDEN, F. V. Remarks on the Lower Cretaceous beds of Kansas and Nebraska, together with descriptions of Carboniferous fossils from the valley of Kansas River. <Proc. Acad. Nat. Sci. Phila., vol. x, pp. 256-264. 1858. Philadelphia, 1859.

|                                                                  | Page.   |
|------------------------------------------------------------------|---------|
| Description of new Carboniferous fossils.....                    | 260     |
| <i>Fusulina cylindrica</i> , Fischer .....                       | 260-261 |
| <i>F. cylindrica</i> var. <i>ventricosa</i> , M. & H., 1858..... | 261     |
| <i>Orthosina crassa</i> , n. s., M. & H., 1858.....              | 261     |
| <i>Chonetes myronata</i> , n. s., M. & H., 1858 .....            | 262     |
| <i>Axinus (Schizodus) oratus</i> , n. s., M. & H., 1858.....     | 262     |
| <i>Allorisma? altirostrata</i> , n. s., M. & H., 1858.....       | 263     |
| <i>Allorisma subcuneata</i> , n. s., M. & H., 1858 .....         | 263     |
| <i>Allorisma? leavenworthensis</i> , n. s., M. & H., 1858.....   | 263-264 |
| <i>Allorisma? cooperi</i> , M. & H., (1858).....                 | 264     |
| <i>Pleurotomaria subturbinata</i> , n. s., M. & H., 1858.....    | 264     |
| <i>Pleurotomaria lumerosa</i> , n. s., M. & H., 1858.....        | 264     |

13

MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains from North-eastern Kansas, indicating the existence of Permian rocks in that territory. <Trans. Albany Institute, vol. iv, pp. 73-88. 1858. Albany, 1858-1864.

This includes a note in relation to the priority of discovery of these fossils of Permian type.

DESCRIPTIONS OF FOSSILS.

|                                                                         | Page. |
|-------------------------------------------------------------------------|-------|
| <i>Monotis hawni</i> , n. s., M. & H., 1858 .....                       | 76-77 |
| <i>Myalina (Mytelus) perattenuata</i> , n. s., M. & H., 1858.....       | 77-78 |
| <i>Bakevellia parva</i> , n. s., M. & H., 1858 .....                    | 78-79 |
| <i>Leda (Nucula) subscitula</i> , n. s., M. & H., 1858 .....            | 79    |
| <i>Edmondia? calhouni</i> , n. s., M. & H., 1858.....                   | 80    |
| <i>Pleurophorus? occidentalis</i> , n. s., M. & H., 1858.....           | 80-81 |
| <i>Pleurophorus? (Cardinea) subcuneata</i> , n. s., M. & H., 1858 ..... | 81-82 |
| <i>Lyonsia (Panopæa) concava</i> , n. s., M. & H., 1858 .....           | 82-83 |
| <i>Panopæa cooperi</i> , n. s., M. & H., 1858.....                      | 83    |
| <i>Nautilus eccentricus</i> , n. s., M. & H., 1858.....                 | 83-84 |

14

MEEK, F. B., and HAYDEN, F. V. Geological explorations in Kansas Territory. <Proc. Acad. Nat. Sci. Phila., vol. xi, pp. 8-30. 1859. Philadelphia, 1860.

|                                                                                                                                              | Page. |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------|
| General section of the rocks of Kansas valley from the Cretaceous down, so as to include portions of the upper Coal measures.....            | 16-18 |
| List of the species mentioned in this paper, with some remarks on the synonymy, and references to the works in which they are described..... | 24-30 |
| <i>Foraminifera</i> .....                                                                                                                    | 24    |
| <i>Fusulina cylindrica</i> , Fischer.....                                                                                                    | 24    |
| <i>Fusulina cylindrica</i> var. <i>ventricosa</i> , M. & H. ....                                                                             | 24    |
| <i>Bryozoa</i> .....                                                                                                                         | 24    |
| <i>Synocladia biserialis</i> , Swallow .....                                                                                                 | 24    |
| <i>Acanthocladia americana</i> , Swallow.....                                                                                                | 24    |
| <i>Echinodermata</i> .....                                                                                                                   | 24    |
| <i>Cyathocrinus</i> ———?.....                                                                                                                | 24    |
| <i>Archæocidaris</i> ———?.....                                                                                                               | 25    |
| <i>Archæocidaris</i> ———?.....                                                                                                               | 25    |



|                                                                             | Page. |
|-----------------------------------------------------------------------------|-------|
| <i>Brachiopoda</i> .....                                                    | 25    |
| <i>Discina tenuilineata</i> , n. s., M. & H., 1859 .....                    | 25    |
| <i>D. manhattanensis</i> , n. s., M. & H., 1859 .....                       | 25    |
| <i>Productus splendens</i> (?) Norwood & Pratten .....                      | 25    |
| <i>P. norwoodi</i> , Swallow .....                                          | 25    |
| <i>P. rogersi</i> , Norwood & Pratten .....                                 | 26    |
| <i>P. pustulosus</i> (?), Phillips .....                                    | 26    |
| <i>P. prattenianus</i> , Norwood .....                                      | 26    |
| <i>P. calhounianus</i> , Swallow .....                                      | 26    |
| <i>Ohonetes verneuilliana</i> , Norwood & Pratten .....                     | 26    |
| <i>C. mucronata</i> , M. & H., 1858 .....                                   | 26    |
| <i>Orthisina crassa</i> , M. & H., 1858 .....                               | 26    |
| <i>O. umbraculum</i> ?, Schlot sp. ....                                     | 26    |
| <i>O. missouriensis</i> , Swallow .....                                     | 26    |
| <i>O. shumardiana</i> , Swallow .....                                       | 26    |
| <i>Terebratula millepunctata</i> , Hall .....                               | 26-27 |
| <i>Rhynchonella uta</i> , Marcou .....                                      | 27    |
| <i>Retzia mormonii</i> , Marcou .....                                       | 27    |
| <i>Spirifer kentuckensis</i> , Shumard .....                                | 27    |
| <i>S. cameratus</i> , Morton .....                                          | 27    |
| <i>S. hemiplicata</i> , Hall .....                                          | 28    |
| <i>S. lineatus</i> , Phillips .....                                         | 28    |
| <i>Spirifer</i> , ——— .....                                                 | 28    |
| <i>S. planoconvexa</i> , Shumard .....                                      | 28    |
| <i>Spirigera subtilita</i> , Shumard .....                                  | 28    |
| <i>Spirigera</i> ———? .....                                                 | 28    |
| <i>Lamellibranchiata</i> .....                                              | 28    |
| <i>Monotis hawni</i> , M. & H., 1858 .....                                  | 28    |
| <i>Myalina</i> ( <i>Mytilus</i> ) <i>perattenuata</i> , M. & H., 1858 ..... | 28-29 |
| <i>Myalina squamosa</i> (J. de C.) Sowerby .....                            | 29    |
| <i>M. subquadrata</i> , Shumard .....                                       | 29    |
| <i>Edmondia</i> ? <i>calhouni</i> , M. & H., 1858 .....                     | 29    |
| <i>Bakerella parva</i> , M. & H., 1858 .....                                | 29    |
| <i>Arca carbonaria</i> , Cox .....                                          | 29    |
| <i>Leda subscitula</i> , M. & H., 1858 .....                                | 29    |
| <i>Pleurophorus</i> ? <i>subcuneata</i> , M. & H., 1858 .....               | 29    |
| <i>Azinus</i> ( <i>Schizodus</i> ) <i>ovatus</i> , M. & H., 1858 .....      | 29    |
| <i>Azinus rotundatus</i> , Brown .....                                      | 29    |
| <i>Allorisma</i> ? <i>leavenworthensis</i> , M. & H., 1858 .....            | 29    |
| <i>A. subcuneata</i> , M. & H., 1858 .....                                  | 29    |
| <i>A.</i> ? <i>altirostrata</i> , M. & H., 1858 .....                       | 29    |
| <i>A.</i> ? <i>cooperi</i> , M. & H., 1858 .....                            | 29    |
| <i>Leptodomus granosus</i> , Shumard .....                                  | 29    |
| <i>Gasteropoda</i> .....                                                    | 30    |
| <i>Pleurotomaria humerosa</i> , M. & H., 1858 .....                         | 30    |
| <i>P. subturbinata</i> , M. & H., 1858 .....                                | 30    |
| <i>Bellerophon</i> ———? .....                                               | 30    |
| <i>Euomphalus</i> ———? .....                                                | 30    |
| <i>Cephalopoda</i> .....                                                    | 30    |
| <i>Nautilus eccentricus</i> , M. & H., 1858 .....                           | 30    |
| <i>Fishes</i> .....                                                         | 30    |
| <i>Xystracanthus arcuatus</i> , Leidy .....                                 | 30    |
| <i>Oladodus occidentalis</i> , Leidy .....                                  | 30    |
| <i>Petalodus alleghaniensis</i> , Leidy .....                               | 30    |

## 15.

MEEK, F. B., and HAYDEN, F. V. On a new genus of Patelliform shells from the Cretaceous rocks of Nebraska. <Am. Journ. Sci., vol. xxix, 2d ser., pp. 33-35, plate i. 1860. New Haven, 1860.

Genus *Anisomyon*,\* n. g., M. & H., 1860.

*Anisomyon patelliformis*, M. & H., pl. i, figs. 1-3. .... Page. 34-35

\* *Ἀνίσος*, unequal; *μῦών*, muscle; in allusion to the unsymmetrical muscular scar.

Page.

The authors refer the following Nebraska species to this genus:

|                                                                                                                         |    |
|-------------------------------------------------------------------------------------------------------------------------|----|
| <i>Anisomyon borealis</i> (= <i>Hipponyx borealis</i> , Morton, 1842, = <i>Helcium carinatum</i> , M. & H., 1856) ..... | 35 |
| <i>Anisomyon sexsulcatus</i> (= <i>Helcium sexsulcatum</i> , M. & H.) .....                                             | 35 |
| <i>Anisomyon alveolus</i> (= <i>Helcium alveolum</i> , M. & H.) .....                                                   | 35 |
| <i>Anisomyon patelliformis</i> (= <i>Helcium patelliforme</i> , M. & H.) .....                                          | 35 |
| <i>Anisomyon suboratus</i> (= <i>Helcium suboratum</i> , M. & H.) .....                                                 | 35 |

16.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new organic remains from the Tertiary, Cretaceous, and Jurassic rocks of Nebraska. <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 175-184. 1860. Philadelphia, 1861.

A description of the Carboniferous species *Myalina aviculoides* is also added; also a corrected list of fossils.

TERTIARY SPECIES.

Page.

|                                                                                       |         |
|---------------------------------------------------------------------------------------|---------|
| <i>Gasteropoda</i> .....                                                              | 175     |
| <i>Helix cransi</i> , n. s., [M.] & H., 1860 .....                                    | 175     |
| <i>Planorbis vetulus</i> , n. s., M. & H., 1860 .....                                 | 175     |
| <i>Planorbis leidyi</i> , n. s., M. & H., 1860 .....                                  | 175     |
| <i>Conchifera</i> .....                                                               | 175     |
| <i>Sphaerium planum</i> , n. s., M. & H., 1860 .....                                  | 175-176 |
| <i>Sphaerium recticardinale</i> , n. s., M. & H., 1860 .....                          | 176     |
| <i>Cyrena</i> ( <i>Corbicula</i> ?) <i>cytheriformis</i> , n. s., M. & H., 1860 ..... | 176     |

CRETACEOUS SPECIES.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Cephalopoda</i> .....                                          | 176     |
| <i>Phylloteuthis</i> , n. g., M. & H., 1860 .....                 | 176     |
| <i>Phylloteuthis suboratus</i> , n. s., M. & H., 1860 .....       | 176     |
| <i>Helicoceras angulatum</i> , n. s., M. & H., 1860 .....         | 176     |
| <i>Ammonites placenta</i> var. <i>intercalaris</i> , M. & H. .... | 177     |
| <i>Ammonites vermilionensis</i> , n. s., M. & H., 1860 .....      | 177     |
| <i>Scaphites nodosus</i> var. <i>plenus</i> , M. & H. ....        | 177-178 |
| <i>Gasteropoda</i> .....                                          | 178     |
| <i>Aporrhais parva</i> , n. s., M. & H., 1860 .....               | 178     |
| <i>Aporrhais sublevis</i> , n. s., M. & H., 1860 .....            | 178     |
| <i>Dentalium pauperculum</i> , n. s., M. & H., 1860 .....         | 178     |
| <i>Cylichna scitula</i> , n. s., M. & H., 1860 .....              | 178     |
| <i>Conchifera</i> .....                                           | 178     |
| <i>Teredo selliformis</i> , n. s., M. & H., 1860 .....            | 178-179 |
| <i>Maetra siouxensis</i> , n. s., M. & H., 1860 .....             | 179     |
| <i>Maetra gracilis</i> , n. s., M. & H., 1860 .....               | 179     |
| <i>Tellina</i> ? <i>formosa</i> , n. s., M. & H., 1860 .....      | 179     |
| <i>Cyprina humilis</i> , n. s., M. & H., 1860 .....               | 179-180 |
| <i>Avicula subgibbosa</i> , n. s., M. & H., 1860 .....            | 180     |
| <i>Inoceramus cuneatus</i> , n. s., M. & H., 1860 .....           | 180     |
| <i>Inoceramus vanuxemi</i> , n. s., M. & H., 1860 .....           | 180     |
| <i>Inoceramus balchii</i> , n. s., M. & H., 1860 .....            | 180-181 |
| <i>Inoceramus subcompressus</i> , n. s., M. & H., 1860 .....      | 181     |
| <i>Inoceramus aviculoid[e]s</i> , n. s., M. & H., 1860 .....      | 181     |
| <i>Anomia obliqua</i> , n. s., M. & H., 1860 .....                | 181     |
| <i>Anomia subtrigonalis</i> , n. s., M. & H., 1860 .....          | 181     |
| <i>Ostrea inornata</i> , n. s., M. & H., 1860 .....               | 181-182 |

JURASSIC SPECIES.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| <i>Conchifera</i> .....                                               | 182     |
| <i>Pholadomya humilis</i> , n. s., M. & H., 1860 .....                | 182     |
| <i>Myacites nebrascensis</i> , n. s., M. & H., 1860 .....             | 182     |
| <i>Thracia</i> ? <i>sublevis</i> , n. s., M. & H., 1860 .....         | 182     |
| <i>Thracia</i> ? <i>arcuata</i> , n. s., M. & H., 1860 .....          | 182     |
| <i>Cardium shumardi</i> , n. s., M. & H., 1860 .....                  | 182-183 |
| <i>Tancredia</i> ? <i>aequilateralis</i> , n. s., M. & H., 1860 ..... | 183     |
| <i>Tancredia warrenana</i> , n. s., M. & H., 1860 .....               | 183     |

|                                                      | Page.   |
|------------------------------------------------------|---------|
| <i>Astarte fragilis</i> , n. s., M. & H., 1860.....  | 183     |
| <i>Astarte inornata</i> , n. s., M. & H., 1860.....  | 183     |
| <i>Trigonia conradi</i> , n. s., M. & H., 1860.....  | 183-184 |
| <i>Pecten extenuatus</i> , n. s., M. & H., 1860..... | 184     |

## 17.

MEEK, F. B. Descriptions of new fossil remains collected in Nebraska and Utah by the exploring expeditions under the command of Capt. J. H. Simpson, of the U. S. topographical engineers (extracted from that officer's forthcoming report). <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 308-315. 1860. Philadelphia, 1861.

Devonian, Carboniferous, Jurassic, Cretaceous, and Tertiary. Republished with illustrations in a quarto volume of Captain Simpson's Reports, in 1876.

## DEVONIAN SPECIES.

|                                                            | Page.   |
|------------------------------------------------------------|---------|
| <i>Brachiopoda</i> .....                                   | 308     |
| <i>Spirifera norwoodi</i> , n. s., Meek, 1860 .....        | 308     |
| <i>Spirifera engelmanni</i> , n. s., F. B. Meek, 1860..... | 308-309 |
| <i>Spirifera macra</i> , n. s., F. B. Meek, 1860.....      | 309     |

## CARBONIFEROUS SPECIES.

|                                                                |         |
|----------------------------------------------------------------|---------|
| <i>Brachiopoda</i> .....                                       | 309     |
| <i>Productus semistriatus</i> , n. s., F. B. Meek, 1860.....   | 309     |
| <i>Productus multistriatus</i> , n. s., F. B. Meek, 1860 ..... | 309-310 |
| <i>Spirifera scabina</i> , n. s., F. B. Meek, 1860.....        | 310     |
| <i>Spirifera pulchra</i> , n. s., F. B. Meek, 1860 .....       | 310     |
| <i>Conchifera</i> .....                                        | 310     |
| <i>Pecten utahensis</i> , n. s., F. B. Meek, 1860 .....        | 310     |
| <i>Cephalopoda</i> .....                                       |         |
| <i>Orthoceras baculum</i> , n. s., F. B. Meek, 1860 .....      | 310-311 |

## JURASSIC SPECIES.

|                                                                      |     |
|----------------------------------------------------------------------|-----|
| <i>Conchifera</i> .....                                              | 311 |
| <i>Ostrea engelmanni</i> , n. s., F. B. Meek, 1860 .....             | 311 |
| <i>Pecten bellistriata</i> , n. s., F. B. Meek, 1860 .....           | 311 |
| <i>Gasteropoda</i> .....                                             | 311 |
| <i>Dentalium?</i> <i>subquadratum</i> , n. s., F. B. Meek, 1860..... | 311 |

## CRETACEOUS SPECIES.

|                                                           |         |
|-----------------------------------------------------------|---------|
| <i>Conchifera</i> .....                                   | 311     |
| <i>Anomia concentrica</i> , n. s., F. B. Meek, 1860.....  | 311-312 |
| <i>Inoceramus simpsoni</i> , n. s., F. B. Meek, 1860..... | 312     |

## TERTIARY SPECIES.

|                                                                                  |         |
|----------------------------------------------------------------------------------|---------|
| <i>Conchifera</i> .....                                                          | 312     |
| <i>Unio retusta</i> , n. s., Meek, 1860 .....                                    | 312     |
| <i>Unio haydeni</i> , n. s., Meek, 1860 .....                                    | 312     |
| <i>Corbula</i> ( <i>Potamomya?</i> ) <i>pyriformis</i> , n. s., Meek, 1860.....  | 312-313 |
| <i>Corbula</i> ( <i>Potamomya?</i> ) <i>concentrica</i> , n. s., Meek, 1860..... | 313     |
| <i>Corbula</i> ( <i>Potamomya?</i> ) <i>engelmanni</i> , n. s., Meek, 1860.....  | 313     |
| <i>Gasteropoda</i> .....                                                         | 313     |
| <i>Melania humerosa</i> , n. s., Meek, 1860.....                                 | 313     |
| <i>Melania simpsoni</i> , n. s., Meek, 1860 .....                                | 313-314 |
| <i>Melania areta</i> , n. s., Meek, 1860.....                                    | 314     |
| <i>Melania?</i> <i>nitidula</i> , n. s., Meek, 1860.....                         | 314     |
| <i>Planorbis spectabilis</i> , n. s., Meek, 1860.....                            | 314     |
| <i>Planorbis utahensis</i> , n. s., Meek, 1860 .....                             | 314     |
| <i>Limnaea retusta</i> , n. s., Meek, 1860.....                                  | 314     |
| <i>Limnaea similis</i> , n. s., Meek, 1860.....                                  | 314     |
| <i>Mcclampus priscus</i> , n. s., Meek, 1860.....                                | 315     |

18.

MEEK, F. B., and HAYDEN, F. V. Systematic catalogue with synonymy, &c., of Jurassic, Cretaceous, and Tertiary fossils, collected in Nebraska by the exploring expeditions under the command of Lieut. G. K. Warren, of U. S. Topographical Engineers. <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 417-432. 1860. Philadelphia, 1861.

Of the 276 species and varieties enumerated in the following catalogue, 25 are from Jurassic rocks, 194 from Cretaceous, and the remaining 57 from Tertiary strata.

|                         | Page.   |
|-------------------------|---------|
| Jurassic species.....   | 417-419 |
| Cretaceous species..... | 419-430 |
| Tertiary species.....   | 430-432 |

19.

MEEK, F. B., and WORTHEN, A. H. Descriptions of new species of Crinoidea and Echinoidea, from the Carboniferous rocks of Illinois and other western States. <Proc. Acad. Nat. Sci. Phila., vol. xii, pp. 379-397. 1860. Philadelphia, 1861.

Afterward republished in the Illinois Geological Reports, vol. ii.

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>Platycrinus</i> , Miller.....                                    | 379     |
| <i>P. prattenanus</i> , n. s., M. & W., 1860.....                   | 379-380 |
| <i>P. penicillus</i> , n. s., M. & W., 1860.....                    | 380     |
| <i>P. plenus</i> , n. s., M. & W., 1860.....                        | 380-381 |
| <i>Dichocrinus</i> , Munster.....                                   | 381     |
| <i>D. constrictus</i> , n. s., M. & W., 1860.....                   | 381     |
| <i>D. conus</i> , n. s., M. & W., 1860.....                         | 381-382 |
| <i>D. (Pterotocrinus) crassus</i> , n. s., M. & W., 1860.....       | 382-383 |
| <i>D. (Pterotocrinus) chesterensis</i> , n. s., M. & W., 1860.....  | 383     |
| <i>Trematocrinus</i> , Hall, 1860.....                              | 383     |
| <i>T. fuscillus</i> , n. s., M. & W., 1860.....                     | 383-384 |
| <i>Actinocrinus</i> , Miller.....                                   | 384     |
| <i>A. validus</i> , n. s., M. & W., 1860.....                       | 384-385 |
| <i>A. asteriscus</i> , n. s., M. & W., 1860.....                    | 385-386 |
| <i>A. speciosus</i> , n. s., M. & W., 1860.....                     | 386     |
| <i>A. scitulus</i> , n. s., M. & W., 1860.....                      | 386-387 |
| <i>A. araneolus</i> , n. s., M. & W., 1860.....                     | 387-388 |
| <i>A. (Amphoracrinus) subturbinatus</i> , n. s., M. & W., 1860..... | 388-389 |
| <i>Forbsiocrinus</i> , De Koninck & Le Hon.....                     | 389     |
| <i>F. ? norwoodi</i> , n. s., M. & W., 1860.....                    | 389     |
| <i>F. ? semiovatus</i> , n. s., M. & W., 1860.....                  | 389-390 |
| <i>Zeacrinus</i> , Troost.....                                      | 390     |
| <i>Z. discus</i> , n. s., M. & W., 1860.....                        | 390     |
| <i>Z. troostanus</i> , n. s., M. & W., 1860.....                    | 390-391 |
| <i>Z. planobrachiatus</i> , n. s., M. & W., 1860.....               | 391     |
| <i>Cyathocrinus</i> , Miller.....                                   | 391     |
| <i>C. saffordi</i> , n. s., M. & W., 1860.....                      | 391-392 |
| <i>C. ? sangamonensis</i> , n. s., M. & W., 1860.....               | 392     |
| <i>C. ? crassus</i> , n. s., M. & W., 1860.....                     | 392-393 |
| <i>C. scitulus</i> , n. s., M. & W., 1860.....                      | 393     |
| <i>C. angulatus</i> , n. s., M. & W., 1860.....                     | 393-394 |
| <i>Poteriocrinus</i> , Miller.....                                  | 394     |
| <i>P. (Scaphiocrinus) decadactylus</i> , n. s., M. & W., 1860.....  | 394     |
| <i>P. swallovi</i> , n. s., M. & W., 1860.....                      | 394-395 |
| <i>Echinoidea</i> .....                                             |         |
| <i>Archæocidaris</i> , McCoy.....                                   | 395     |
| <i>A. mucronatus</i> , n. s., M. & W., 1860.....                    | 395-396 |
| <i>Palæchinus</i> , McCoy.....                                      | 396     |
| <i>P. burlingtonensis</i> , n. s., M. & W., 1860.....               | 396     |
| <i>Melonites</i> , Owen & Norwood.....                              | 396-397 |
| <i>M. danae</i> , n. s., M. & W., 1860.....                         | 397     |



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Genera *Sphenopoterium*, *Soleniscus*. Afterward republished in the Illinois Geological Reports, vol. ii.

|                                                                                        | Page.   |
|----------------------------------------------------------------------------------------|---------|
| <i>Zoophyta</i> .....                                                                  |         |
| <i>Sphenopoterium</i> ,* n. g., M. & W., 1860.....                                     | 447-448 |
| <i>S. obtusum</i> , n. s., M. & W., 1860.....                                          | 448     |
| <i>S. compressum</i> , n. s., M. & W., 1860.....                                       | 448     |
| <i>S. enorme</i> , n. s., M. & W., 1860.....                                           | 448     |
| <i>S. cuneatum</i> , n. s., M. & W., 1860.....                                         | 448     |
| <i>Echinodermata</i> .....                                                             | 449     |
| <i>Asteridae</i> .....                                                                 | 449     |
| <i>Palasterina</i> , McCoy.....                                                        | 449     |
| Subgenus <i>Schoenaster</i> .....                                                      | 449     |
| <i>Palasterina</i> ( <i>Schoenaster</i> ) <i>finbriata</i> , n. s., M. & W., 1860..... | 449     |
| <i>Mollusca</i> .....                                                                  | 450     |
| <i>Brachiopoda</i> .....                                                               | 450     |
| <i>Chonetes</i> , Fischer.....                                                         | 450     |
| <i>C. planumbona</i> , n. s., M. & W., 1860.....                                       | 450     |
| <i>Productus</i> , Sowerby.....                                                        | 450     |
| <i>P. nanus</i> , n. s., M. & W., 1860.....                                            | 450     |
| <i>P. parvus</i> , n. s., M. & W., 1860.....                                           | 450-451 |
| <i>P. scitulus</i> , n. s., M. & W., 1860.....                                         | 451     |
| <i>Rhynchonella</i> , Fischer.....                                                     | 451     |
| <i>R. subtrigona</i> , n. s., M. & W., 1860.....                                       | 451     |
| <i>Athyris</i> , McCoy.....                                                            | 451     |
| <i>A. parvirostra</i> , n. s., M. & W., 1860.....                                      | 451-452 |
| <i>Conchifera</i> .....                                                                | 452     |
| <i>Pecten</i> , Linnæus.....                                                           | 452     |
| <i>P. tenuilineatus</i> , n. s., M. & W., 1860.....                                    | 452     |
| <i>Aviculopecten</i> , McCoy.....                                                      | 452     |
| <i>A. oweni</i> , n. s., M. & W., 1860.....                                            | 452-453 |
| <i>A. coxanus</i> , n. s., M. & W., 1860.....                                          | 453     |
| <i>A. burlingtonensis</i> , n. s., M. & W., 1860.....                                  | 453     |
| <i>A. koninckii</i> , n. s., M. & W., 1860.....                                        | 453-454 |
| <i>A. interlineatus</i> , n. s., M. & W., 1860.....                                    | 454     |
| <i>A. amplus</i> , n. s., M. & W., 1860.....                                           | 454-455 |
| <i>A. pellucidus</i> , n. s., M. & W., 1860.....                                       | 455     |
| <i>Aricula</i> , Klein.....                                                            | 455     |
| <i>A. oblonga</i> , n. s., M. & W., 1860.....                                          | 455     |
| <i>Myalina</i> , Koninck.....                                                          | 455     |
| <i>M. angulata</i> , n. s., M. & W., 1860.....                                         | 455-456 |
| <i>M. concentrica</i> , n. s., M. & W., 1860.....                                      | 456     |
| <i>M. recurvirostra</i> , n. s., M. & W., 1860.....                                    | 456     |
| <i>Solenya</i> , Lamarek.....                                                          | 457     |
| <i>S. radiata</i> , n. s., M. & W., 1860.....                                          | 457     |
| <i>Leda</i> , Schumaker.....                                                           | 457     |
| <i>L. (Yoldia?) levistriata</i> , n. s., M. & W., 1860.....                            | 457     |
| <i>Sekizodus</i> , King.....                                                           | 457     |
| <i>S. chesterensis</i> , n. s., M. & W., 1860.....                                     | 457     |
| <i>Cardiomorpha</i> , Koninck.....                                                     | 458     |
| <i>C. radiata</i> , n. s., M. & W., 1860.....                                          | 458     |
| <i>Gasteropoda</i> .....                                                               | 458     |
| <i>Bellerophon</i> , Montfort.....                                                     | 458     |
| <i>B. crassus</i> , n. s., M. & W., 1860.....                                          | 458     |
| <i>Pleurotomaria</i> , DeFrance.....                                                   | 458     |
| <i>P. subconstricta</i> , n. s., M. & W., 1860.....                                    | 458-459 |
| <i>P. granulostriata</i> , n. s., M. & W., 1860.....                                   | 459     |
| <i>P. tenuicincta</i> , n. s., M. & W., 1860.....                                      | 459     |

\* Σφην, a wedge; ποτηριον, a cup.

|                                                                    | Page.   |
|--------------------------------------------------------------------|---------|
| <i>P. pratteni</i> , n. s., M. & W., 1860.....                     | 459-460 |
| <i>P. subsinuata</i> , n. s., M. & W., 1860.....                   | 460     |
| <i>P. chesterensis</i> , n. s., M. & W., 1860.....                 | 460     |
| <i>P. subscalaris</i> , n. s., M. & W., 1860.....                  | 460-461 |
| <i>P. speciosa</i> , n. s., M. & W., 1860.....                     | 461     |
| <i>P. turbiniformis</i> , n. s., M. & W., 1860.....                | 461     |
| <i>P. scitula</i> , n. s., M. & W., 1860.....                      | 461-462 |
| <i>P. shumardi</i> , n. s., M. & W., 1860.....                     | 462     |
| <i>Straparollus</i> , Montfort? = <i>Euomphalus</i> , Sowerby..... | 462     |
| <i>Euomphalus planodorsatus</i> , n. s., M. & W., 1860.....        | 462     |
| <i>E. umbilicatus</i> , n. s., M. & W., 1860.....                  | 462-463 |
| <i>Naticopsis</i> , McCoy.....                                     | 463     |
| <i>N. nodosus</i> , n. s., M. & W., 1860.....                      | 463     |
| <i>N. hollidayi</i> , n. s., M. & W., 1860.....                    | 463     |
| <i>Platyostoma</i> , Conrad.....                                   | 463     |
| <i>P. nana</i> , n. s., M. & W., 1860.....                         | 463     |
| <i>P. ? tumida</i> , n. s., M. & W., 1860.....                     | 463-464 |
| <i>Eunema</i> , Salter.....                                        | 464     |
| <i>E. ? salteri</i> , n. s., M. & W., 1860.....                    | 464     |
| <i>Loxonema</i> , Phillips.....                                    | 464     |
| <i>L. scitula</i> , n. s., M. & W., 1860.....                      | 464-465 |
| <i>L. rugosa</i> , n. s., M. & W., 1860.....                       | 465     |
| <i>L. cerithiformis</i> , n. s., M. & W., 1860.....                | 465     |
| <i>L. inornata</i> , n. s., M. & W., 1860.....                     | 465     |
| <i>L. nitidula</i> , n. s., M. & W., 1860.....                     | 465-466 |
| <i>Eulima</i> , Risso.....                                         | 466     |
| <i>E. ? peracuta</i> , n. s., M. & W., 1860.....                   | 466     |
| <i>Macrocheilus</i> , Phillips.....                                | 466     |
| <i>M. medialis</i> , n. s., M. & W., 1860.....                     | 466-467 |
| <i>M. intercalaris</i> , n. s., M. & W., 1860.....                 | 467     |
| <i>M. pulchellus</i> , n. s., M. & W., 1860.....                   | 467     |
| <i>Soleniscus</i> , n. g., M. & W., 1860.....                      | 467     |
| <i>S. typicus</i> , n. s., M. & W., 1860.....                      | 467-468 |
| <i>Cephalopoda</i> .....                                           | 468     |
| <i>Orthoceras</i> , Breynius.....                                  | 468     |
| <i>O. expansum</i> , n. s., M. & W., 1860.....                     | 468     |
| <i>Cyrtoceras</i> , Goldfuss.....                                  | 468     |
| <i>C. curtum</i> , n. s., M. & W., 1860.....                       | 468     |
| <i>C. ? dilatatum</i> , n. s., M. & W., 1860.....                  | 468-469 |
| <i>Nautilus</i> , Breynius.....                                    | 469     |
| <i>N. subglobosus</i> , n. s., M. & W., 1860.....                  | 469     |
| <i>N. chesterensis</i> , n. s., M. & W., 1860.....                 | 469     |
| <i>N. spectabilis</i> , n. s., M. & W., 1860.....                  | 469     |
| <i>N. (Discus) planorbiformis</i> , n. s., M. & W., 1860.....      | 469-470 |
| <i>N. (Discus) trisulcatus</i> , n. s., M. & W., 1860.....         | 470     |
| <i>N. (Discus) digonus</i> , n. s., M. & W., 1860.....             | 470     |
| <i>N. (Discus) sangamonensis</i> , n. s., M. & W., 1860.....       | 470-471 |
| <i>Goniatites</i> , De Haan.....                                   | 471     |
| <i>G. globulosus</i> , n. s., M. & W., 1860.....                   | 471     |
| <i>G. iowensis</i> , n. s., M. & W., 1860.....                     | 471     |
| <i>G. lyoni</i> , n. s., M. & W., 1860.....                        | 471-472 |
| Subgenus <i>Oligoporus</i> ,* n. s. g., M. & W., 1860.....         | 472     |

## 21.

MEEK, F. B., and WORTHEN, A. H. Remarks on the age of the Goniatite limestone at Rockford, Indiana, and its relation to the "Black Slate" of the western States, and to some of the succeeding rocks above the latter. <Am. Journ. Sci., vol. xxxii, 2d ser., pp. 167-177. 1861. New Haven, 1861.

The authors conclude it to be probably of Carboniferous age, and, at any rate, much more recent than the Chemung, and not equivalent to any New York rock.

\* *ὀλίγος*, few; and *πόρος*, opening a pore.

MEEK, F. B., and WORTHEN, A. H. Descriptions of new Paleozoic fossils from Illinois and Iowa. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 128-148. 1861. Philadelphia. 1862.

Genera Bursacrinus, Cardiopsis, Orthonema. Afterward republished in the Illinois Geological Reports, vol. ii.

|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Echinodermata:</i>                                                      |         |
| <i>Crinoidea:</i>                                                          |         |
| <i>Platycrinus</i> , Miller, 1821.                                         |         |
| <i>P. oweni</i> , n. s., M. & W., 1861 .....                               | 128-129 |
| <i>P. scobina</i> , n. s., M. & W., 1861 .....                             | 129     |
| <i>P. (Pleurocrinus) asper</i> , n. s., M. & W., 1861 .....                | 129-130 |
| <i>Forbesiocrinus</i> , Koninek & Le Hon .....                             | 130     |
| <i>F. monroensis</i> , n. s., M. & W., 1861 .....                          | 130-131 |
| <i>F. agassizi</i> var. <i>giganteus</i> , n. s., M. & W., 1861 .....      | 131     |
| <i>Actinocrinus</i> , Miller, 1821 .....                                   | 131     |
| <i>A. dodecadactylus</i> , n. s., M. & W., 1861 .....                      | 131     |
| <i>A. pyriformis</i> var. <i>rudis</i> , M. & W., 1861 .....               | 131-132 |
| <i>A. (Amphoracrinus) ? concavus</i> , n. s., M. & W., 1861 .....          | 132-133 |
| <i>A. (Pradocrinus) ? amplus</i> , n. s., M. & W., 1861 .....              | 133-134 |
| <i>A. sillimani</i> , n. s., M. & W., 1861 .....                           | 134-135 |
| <i>Agariocrinus</i> , Troost .....                                         | 135     |
| <i>A. gracilis</i> , n. s., M. & W., 1861 .....                            | 135     |
| <i>Platycrinus multi-branchiatus</i> , n. s., M. & W., 1861 .....          | 135-136 |
| <i>Cyathocrinus</i> , Miller, 1821 .....                                   | 136     |
| <i>C. wachsmuthi</i> , n. s., M. & W., 1861 .....                          | 136     |
| <i>Bursacrinus</i> , n. g., M. & W., 1861 .....                            | 136     |
| <i>B. wachsmuthi</i> , n. s., M. & W., 1861 .....                          | 137     |
| <i>Poteriocrinus</i> , Miller, 1821 .....                                  | 137     |
| <i>P. ? enormis</i> , n. s., M. & W., 1861 .....                           | 137-138 |
| <i>P. sub-impressus</i> , n. s., M. & W., 1861 .....                       | 138     |
| <i>P. tenuibrachiatus</i> , n. s., M. & W., 1861 .....                     | 138-139 |
| <i>P. carinatus</i> , n. s., M. & W., 1861 .....                           | 139-140 |
| Subgenus <i>Scaphiocrinus</i> , Hall, 1858 .....                           | 140     |
| <i>P. (Scaphiocrinus) ? carbonarius</i> , n. s., M. & W., 1861 .....       | 140     |
| <i>P. (Scaphiocrinus) solidus</i> , n. s., M. & W., 1861 .....             | 140-141 |
| <i>P. (Scaphiocrinus) wachsmuthi</i> , n. s., M. & W., 1861 .....          | 141     |
| <i>Blastoidea:</i>                                                         |         |
| <i>Pentremites</i> , Say, 1820 .....                                       | 141     |
| <i>P. cornutus</i> , n. s., M. & W., 1861 .....                            | 141-142 |
| <i>P. melo</i> var. <i>projectus</i> , n. s., M. & W., 1861 .....          | 142     |
| <i>Asteroidea:</i>                                                         |         |
| <i>Petraster</i> , Billings, 1858 .....                                    | 142     |
| <i>P. wilberanus</i> , n. s., M. & W., 1861 .....                          | 142     |
| <i>Mollusca:</i>                                                           |         |
| <i>Brachiopoda:</i>                                                        |         |
| <i>Productus</i> , Sowerby, 1812 .....                                     | 142     |
| <i>P. magnus</i> , n. s., M. & W., 1861 .....                              | 142-143 |
| <i>Spirifera glabra</i> var. <i>contracta</i> , n. s., M. & W., 1861 ..... | 143-144 |
| <i>Lamellibranchiata:</i>                                                  |         |
| * <i>Cardiopsis</i> , n. g., M. & W., 1861 .....                           | 144     |
| <i>Leda</i> , Schumacher, 1817 .....                                       | 144     |
| <i>L. curta</i> , n. s., M. & W., 1861 .....                               | 144-145 |
| <i>Gasteropoda:</i>                                                        |         |
| <i>Dentalium</i> , Lin., 1740 .....                                        | 145     |
| <i>D. venustum</i> , n. s., M. & W., 1861 .....                            | 145     |
| <i>Straparollus</i> , Montfort, 1810 .....                                 | 145     |
| <i>S. similis</i> , n. s., M. & W., 1861 .....                             | 145-146 |
| <i>S. similis</i> var. <i>planus</i> , M. & W., 1861 .....                 | 146     |

\* *Cardium* and *opsis*, from its resemblance to *Cardium*.



|                                                                | Page.   |
|----------------------------------------------------------------|---------|
| † <i>Orthonema</i> , n. g., M. & W., 1861.....                 | 146     |
| <i>Loxonema</i> , Phillips, 1841.....                          | 146     |
| <i>L. multicostrata</i> , n. s., M. & W., 1861.....            | 146-147 |
| <i>Cephalopoda</i> :                                           |         |
| <i>Orthoceras</i> , Breynius, 1732.....                        | 147     |
| <i>O. annulocostatum</i> , n. s., M. & W., 1861.....           | 147     |
| <i>Nautilus</i> , Breynius, 1732.....                          | 147     |
| † Subgenus <i>Trematodiscus</i> , n. s. g., M. & W., 1861..... | 147     |

Corrections in regard to a few fossils described in papers of September and October, 1860.

- Cyathocrinus scitulus* (September, 1860) should be *O. sculptilis*.  
*Platystoma nana* (October, 1860) should be *Naticopsis*.  
*Eulima peracuta* (October, 1860) should be ranged under *Polyphemopsis*, of Portlock, probably a section of the genus *Loxonema*.  
*Orthoceras expansum* (October, 1860) belongs to the genus or subgenus *Actinoceras*.  
*Cyrtoceras curtum* (October, 1860) should be ranged under the subgenus *Aploceras*.

### 23.

MEEK, F. B. Descriptions of new Cretaceous fossils collected by the Northwestern Boundary Commission on Vancouver and Suia Islands. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 314-318. 1861. Philadelphia, 1862.

|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> :                                                 |         |
| <i>Inoceramus subundatus</i> , Meek, n. s., 1861.....                      | 315     |
| <i>Dosinia</i> ? <i>tenuis</i> , n. s., Meek, 1861.....                    | 315     |
| <i>Mactra gibbsana</i> , n. s., Meek, 1861.....                            | 315-316 |
| <i>Cephalopoda</i> :                                                       |         |
| <i>Baculites inornatus</i> , n. s., Meek, 1861.....                        | 316     |
| <i>Baculites occidentalis</i> , n. s., Meek, 1861.....                     | 316-317 |
| <i>Ammonites complexus</i> var. <i>suciaensis</i> , n. s., Meek, 1861..... | 317     |
| <i>Ammonites vancouverensis</i> , n. s., Meek, 1861.....                   | 317-318 |
| <i>Nautilus campbelli</i> , n. s., Meek, 1861.....                         | 318     |

### 24.

MEEK, F. B., and HAYDEN, F. V. Descriptions of new Lower Silurian (Primordial), Jurassic, Cretaceous, and Tertiary fossils, collected in Nebraska by the exploring expedition under the command of Capt. Wm. F. Reynolds, U. S. Top. Engrs., with some remarks on the rocks from which they were obtained. <Proc. Acad. Nat. Sci. Phila., vol. xiii, pp. 415-447. 1861. Philadelphia, 1862.

|                                                                                 | Page.   |
|---------------------------------------------------------------------------------|---------|
| Lower Silurian (Primordial) rocks.....                                          | 415-416 |
| Jurassic rocks.....                                                             | 416-417 |
| Cretaceous rocks.....                                                           | 417-432 |
| Lower series.....                                                               | 417-424 |
| General section of the Cretaceous rocks of Nebraska.....                        | 419     |
| Upper Cretaceous series of Nebraska.....                                        | 424-432 |
| New Jersey section, compiled from the reports of that State.....                | 426     |
| Fox Hill beds.....                                                              | 427     |
| Relations of the upper Cretaceous series of Nebraska to European divisions..... | 428-432 |
| Tertiary rocks.....                                                             | 432-435 |
| General section of the Tertiary rocks of Nebraska.....                          | 433     |

#### SILURIAN (PRIMORDIAL) FOSSILS.

|                                            |         |
|--------------------------------------------|---------|
| <i>Brachiopoda</i> :                       |         |
| <i>Obolella</i> , Billings.....            | 435     |
| <i>O. nana</i> , n. s., M. & H., 1861..... | 435-436 |

† ορθος, straight; νημα, thread.

‡ τρήμα and δίσκος, in allusion to the perforated umbilicus and the discoid form of the shell in the typical species.



|                                                                                  | Page.   |
|----------------------------------------------------------------------------------|---------|
| <i>Pteropoda</i> ? .....                                                         | 436     |
| <i>Theca</i> , Morris .....                                                      | 436     |
| <i>Theca</i> ( <i>Pugiunculus</i> ) <i>gregarea</i> , n. s., M. & H., 1861 ..... | 436     |
| <i>Trilobites</i> .....                                                          | 436     |
| <i>Arionellus</i> , Barrande .....                                               | 436     |
| <i>A.</i> ( <i>Crepicephalus</i> ) <i>oweni</i> , n. s., M. & H., 1861 .....     | 436-437 |

## JURASSIC FOSSILS.

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> .....                                         | 437     |
| <i>Gryphaea</i> , Lamarck .....                                        | 437     |
| <i>G. alceola</i> var. <i>nebrascensis</i> , M. & H., 1861 .....       | 437-439 |
| <i>Modiola</i> , Lamarck .....                                         | 439     |
| <i>M.</i> ( <i>Perna</i> ) <i>formosa</i> , n. s., M. & H., 1861 ..... | 439     |

## CRETACEOUS FOSSILS.

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> .....                                            | 440     |
| <i>Ostrea</i> , Linnaeus .....                                            | 440     |
| <i>O. gabbana</i> , n. s., M. & H., 1861 .....                            | 440     |
| <i>Leda</i> , Schumacher .....                                            | 440     |
| <i>L. bisulcata</i> , n. s., M. & H., 1861 .....                          | 440     |
| <i>Gervillia</i> , DeFrance .....                                         | 441     |
| <i>G. recta</i> , n. s., M. & H., 1861 .....                              | 441     |
| <i>Crenella</i> , Brown .....                                             | 441     |
| <i>C. elegantula</i> , n. s., M. & H., 1861 .....                         | 441-442 |
| <i>Cardium</i> , Linnaeus .....                                           | 442     |
| <i>C. (Hemicardium?) curtum</i> , n. s., M. & H., 1861 .....              | 442     |
| <i>C. pertense</i> , n. s., M. H., 1861 .....                             | 442     |
| <i>Callista</i> , Poli .....                                              | 443     |
| <i>C. deweyi</i> , M. & H., 1856 .....                                    | 443     |
| <i>Tellina</i> , Linnaeus .....                                           | 443     |
| <i>T. nitidula</i> , n. s., M. & H., 1861 .....                           | 443     |
| <i>Lingula</i> , Bruguiere .....                                          | 443     |
| <i>L. nitida</i> , n. s., M. & H., 1861 .....                             | 443-444 |
| <i>Gasteropoda</i> .....                                                  | 444     |
| <i>Neritella</i> , Humphrey .....                                         | 444     |
| <i>N. nebrascensis</i> , n. s., M. & H., 1861 .....                       | 444     |
| <i>Melania</i> , Lamarck .....                                            | 444     |
| <i>M.</i> ( <i>Potodoma</i> ) <i>veterna</i> , n. s., M. & H., 1861 ..... | 444-445 |
| <i>Cephalopoda</i> .....                                                  | 445     |
| <i>Baculites</i> , Lamarck .....                                          | 445     |
| <i>B. baculus</i> , n. s., M. & H., 1861 .....                            | 445     |

## TERTIARY FOSSILS.

|                                                                                              |         |
|----------------------------------------------------------------------------------------------|---------|
| <i>Gasteropoda</i> .....                                                                     | 446     |
| <i>Vicipara</i> , Lamarck .....                                                              | 446     |
| <i>V. raynoldsana</i> , n. s., M. & H., 1861 .....                                           | 446     |
| <i>Helix</i> , Linnaeus .....                                                                | 446     |
| <i>H. spatiosa</i> , n. s., M. & H., 1861 .....                                              | 446-447 |
| <i>H. veterna</i> , n. s., M. & H., 1861 .....                                               | 447     |
| Correction, notes the omission of the name <i>Arcadae</i> on p. 428 of the Proc. for 1860 .. | 447     |

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MEEK, F. B., and HAYDEN, F. V. Descriptions of new Cretaceous fossils from Nebraska Territory, collected by the expedition sent out by the Government under the command of Lieut. John Mullan, U. S. Topographical Engineers, for the location of a wagon road from the sources of the Missouri to the Pacific Ocean. <Proc. Acad. Nat. Sci. Phila., vol. xiv, pp. 21-28. 1862. Philadelphia, 1863.

*Cephalopoda* :

|                                                    | Page. |
|----------------------------------------------------|-------|
| <i>Scaphites</i> , Parkinson .....                 | 22    |
| <i>S. ventricosus</i> , n. s., M. & H., 1862 ..... | 22    |
| <i>S. vermiformis</i> , n. s., M. & H., 1862 ..... | 22-23 |
| <i>Ammonites</i> , Bruguiere .....                 | 23    |

|                                                                           | Page. |
|---------------------------------------------------------------------------|-------|
| <i>A. mullanus</i> , n. s., M. & H., 1862.....                            | 23-25 |
| <i>Nautilus</i> , Breynius.....                                           | 25    |
| <i>N. elegans</i> , Sowerby var. <i>nebrascensis</i> , M. & H., 1862..... | 25    |

*Lamellibranchiata:*

|                                                      |       |
|------------------------------------------------------|-------|
| <i>Inoceramus</i> , Sowerby.....                     | 26    |
| <i>I. undabundus</i> , n. s., M. & H., 1862.....     | 26    |
| <i>I. ezogyroides</i> , n. s., M. & H., 1862.....    | 26-27 |
| <i>I. tenuirostratus</i> , n. s., M. & H., 1862..... | 27    |
| <i>Venilia</i> , Morton.....                         | 27    |
| <i>V. mortoni</i> , n. s., M. & H., 1862.....        | 27-28 |
| <i>Pholadomya</i> , Sowerby.....                     | 28    |
| <i>P. papyracea</i> , n. s., M. & H., 1862.....      | 28    |

26.

MEEK, F. B. Remarks on the family Actæonidæ, with descriptions of some new genera and subgenera. <Am. Journ. Sci., vol. xxxv, 2d ser., pp. 84-94. 1863. New Haven, 1863.

|                                                                               | Page. |
|-------------------------------------------------------------------------------|-------|
| <i>Actæoninæ:</i>                                                             |       |
| <i>Actæonella</i> , d'Orbigny (as restricted).....                            | 89    |
| <i>Trochactæon</i> , Meek, 1863 ( <i>Actæonella</i> (part) d'Orb.).....       | 89-90 |
| Subgenus, <i>Spiractæon</i> Meek, 1863.....                                   | 90    |
| <i>Cylindrites</i> (Auct.) Morris & Lycett (as restricted).....               | 90-91 |
| Subgenus <i>Goniocylindrites</i> .....                                        | 91    |
| <i>Actæonina</i> , d'Orbigny (as restricted).....                             | 91    |
| Subgenus, <i>Trochactæonina</i> Meek, 1863.....                               | 91    |
| <i>Euconactæon</i> , Meek, 1863 ( <i>Actæonina</i> (part) d'Orb. & Alt.)..... | 91-92 |
| Subgenus? <i>Conactæon</i> , Meek.....                                        | 92    |
| <i>Ringiculinæ:</i>                                                           |       |
| <i>Cinulia</i> , Gray.....                                                    | 92    |
| Subgenus <i>Avellana</i> , d'Orbigny.....                                     | 92    |
| Subgenus <i>Euptycha</i> , Meek, 1863.....                                    | 93    |
| <i>Aptycha</i> , Meek, 1863.....                                              | 93-94 |

27.

MEEK, F. B. Remarks on the family Pterriidæ (= Aviculidæ), with descriptions of some new fossil genera. <Am. Journ. Sci., vol. xxxvii, 2d ser., pp. 212-220. 1864. New Haven, 1864.

|                                                                | Page.   |
|----------------------------------------------------------------|---------|
| <i>Pteriidæ</i> (or <i>Aviculidæ</i> ).....                    | 214-215 |
| <i>Pteriniinæ</i> (or <i>Pterinia</i> group).....              | 215     |
| <i>Pteriinæ</i> (or <i>Aviculinæ</i> ).....                    | 215     |
| <i>Melininæ</i> ( <i>Perna</i> or <i>Isognomen</i> group)..... | 215     |
| <i>Gryphorhyncus</i> , n. g., Meek, 1864.....                  | 217-218 |
| <i>Eumicrotis</i> , n. g., Meek, 1864.....                     | 218-220 |

28.

MEEK, F. B. Carboniferous and Jurassic fossils. <Paleontology of California (Whitney), vol. i, pp. 1-16, 2 plates, and pp. 39-53, pls. vii and viii. 1864. Published by authority of the legislature of California, 1844.

DESCRIPTION OF CARBONIFEROUS FOSSILS.

| <i>Foraminifera:</i>                                                  | Page. |
|-----------------------------------------------------------------------|-------|
| <i>Fusulina</i> , Fischer.....                                        | 3     |
| <i>F. robusta</i> , n. s., Meek, 1864, pl. ii, figs. 3 and 3 a-c..... | 3-4   |
| <i>F. gracilis</i> , n. s., Meek, 1864, pl. ii, fig. 1 and 1 a-c..... | 4     |
| <i>F. cylindrica</i> , Fischer ?, 1837, pl. ii, figs. 2 and 2 a.....  | 4     |

|                                                                                               | Page. |
|-----------------------------------------------------------------------------------------------|-------|
| <b>Zoophyta.</b>                                                                              |       |
| <i>Lithostrotion</i> , Fleming .....                                                          |       |
| <i>L. mamillare</i> (f), Castlenau (sp.), 1843, pl. i, figs. 4 and 4 <i>a, b</i> .....        | 5-6   |
| <i>L. ? californiense</i> , n. s., Meek, 1864, pl. i, figs. 2 and 2 <i>a-c</i> .....          | 6-7   |
| <i>Lithostrotion</i> ———, Meek, 1864, pl. i, figs. 3 and 3 <i>a</i> .....                     | 7     |
| <i>Olisiophyllum</i> , Dana .....                                                             | 8     |
| <i>C. gabbi</i> , n. s., Meek, 1864, pl. i, fig. 1 and 1 <i>a, b</i> .....                    | 8-9   |
| <b>Mollusca.</b>                                                                              |       |
| <b>Brachiopoda</b> .....                                                                      | 10    |
| <i>Orthis</i> , Dalman .....                                                                  | 10    |
| <i>Orthis</i> , sp. undt., 1864, pl. ii, figs. 5 and 5 <i>a-c</i> .....                       | 10-11 |
| <i>Productus</i> , Sowerby .....                                                              | 11    |
| <i>P. semireticulatus</i> , Martin (sp.), 1809, pl. ii, figs. 4 and 4 <i>a</i> .....          | 11    |
| <i>Rhynchonella</i> , Fischer .....                                                           | 12    |
| <i>Rhynchonella</i> , sp. undt., 1864 .....                                                   | 12    |
| <i>Spirifer</i> , Sowerby .....                                                               | 13    |
| Subgenus <i>Martinia</i> , McCoy .....                                                        | 13    |
| <i>S. (Martinia) lineatus</i> , Martin ? (sp.), 1809, pl. ii, figs. 6 and 6 <i>a-d</i> .....  | 13    |
| <i>Spiriferina</i> , Davidson .....                                                           | 14    |
| <i>Spiriferina</i> , sp. undt., 1864 .....                                                    | 14    |
| <i>Retzia</i> , King .....                                                                    | 14    |
| <i>R. compressa</i> , n. s., Meek, 1864, pl. ii, figs. 7 and 7 <i>a-c</i> .....               | 14    |
| <b>Gasteropoda</b> .....                                                                      | 15    |
| <i>Euomphalus</i> , Sowerby = <i>Straparollus</i> , Montfort ? .....                          | 15    |
| Subgenus <i>Omphalotrochus</i> , Meek .....                                                   | 15    |
| <i>E. (Omphalotrochus) whitneyi</i> , n. s., Meek, 1864, pl. ii, figs. 8 and 8 <i>a</i> ..... | 15-16 |
| DESCRIPTION OF THE JURASSIC FOSSILS.                                                          |       |
| <b>Brachiopoda</b> .....                                                                      | 39    |
| <b>Rhynchonellidae</b> .....                                                                  | 39    |
| <i>Rhynchonella</i> , Fischer, 1809 .....                                                     | 39    |
| <i>R. gnathophora</i> , n. s., Meek, 1864, pl. viii, fig. 1 and 1 <i>a-f</i> .....            | 39-40 |
| <b>Terebratulidae</b> .....                                                                   | 41    |
| <i>Terebratula</i> , Müller, 1776 .....                                                       | 41    |
| <i>Terebratula</i> ———, 1864, pl. viii, figs. 2 and 2 <i>a, b</i> .....                       | 41    |
| <b>Lamellibranchiata</b> .....                                                                | 42    |
| <b>Ostreidae</b> .....                                                                        | 42    |
| <i>Gryphæa</i> , Lamarck, 1801 .....                                                          | 42    |
| <i>Gryphæa</i> ———, 1864, pl. viii, figs. 4 and 4 <i>a</i> .....                              | 42    |
| <b>Limidae</b> .....                                                                          | 43    |
| <i>Lima</i> , Bruguière, 1792 .....                                                           | 43    |
| <i>L. ? sinuata</i> , n. s., Meek, 1864, pl. vii, figs. 4 and 4 <i>a</i> .....                | 43    |
| <i>L. recticostata</i> , n. s., Meek, 1864, pl. vii, fig. 5 .....                             | 44    |
| <i>L. ? cuneata</i> , n. s., Meek, 1864, pl. vii, figs. 6 and 6 <i>a</i> .....                | 44-45 |
| <b>Pectenidae</b> .....                                                                       | 46    |
| <i>Pecten</i> , Müller, 1776 .....                                                            | 46    |
| <i>P. acutiplicatus</i> , n. s., Meek, 1864, pl. viii, fig. 3 .....                           | 46    |
| <b>Ptertiidae</b> .....                                                                       | 47    |
| <i>Inoceramus</i> , Sowerby, 1814 .....                                                       | 47    |
| <i>I. ? obliquus</i> , n. s., Meek, 1864, pl. vii, figs. 2 and 2 <i>a</i> .....               | 47    |
| <i>I. ? rectangulus</i> , n. s., Meek, 1864, pl. vii, figs. 1 and 1 <i>a</i> .....            | 47-48 |
| <b>Trigoniidae</b> .....                                                                      | 48    |
| <i>Trigonia</i> , Bruguière, 1789 .....                                                       | 48    |
| <i>T. pandicosta</i> , n. s., Meek, 1864, pl. viii, fig. 7 .....                              | 48-49 |
| <b>Mytilidae</b> .....                                                                        | 49    |
| <i>Mytilus</i> , Linnaeus, 1758 .....                                                         | 49    |
| <i>M. multistriatus</i> , n. s., Meek, 1864, pl. vii, figs. 7 and 7 <i>a</i> .....            | 49    |
| <b>Crassatellidae</b> .....                                                                   | 50    |
| <i>Astarte</i> , Sowerby, 1816 .....                                                          | 50    |
| <i>A. ventricosa</i> , n. s., Meek, 1864, pl. viii, figs. 5 and 5 <i>a</i> .....              | 50    |
| <b>Lucinidae</b> .....                                                                        | 50    |
| <i>Unicaudium</i> , d'Orbigny, 1852 .....                                                     | 50    |
| <i>U. ? gibbosum</i> , n. s., Meek, 1864, pl. viii, figs. 8 and 8 <i>a</i> .....              | 50-51 |
| <b>Anatinidae</b> .....                                                                       | 51    |

|                                                                         | Page. |
|-------------------------------------------------------------------------|-------|
| <i>Myacites</i> (Schlot.), Munster, 1840 .....                          | 51    |
| <i>M. depressus</i> , n. s., Meek, 1864, pl. viii, figs. 6 and 6 a..... | 51-52 |
| <i>Cephalopoda</i> .....                                                | 53    |
| <i>Belemnitidae</i> .....                                               | 53    |
| <i>Belemnites</i> , Auct. ....                                          | 53    |
| <i>Belemnites</i> , ———, 1864, pl. viii, figs. 9 and 9 a.....           | 53    |

29.

MEEK, F. B., and HAYDEN, F. V. Paleontology of the Upper Missouri. <Smithsonian contributions to knowledge (172), pp. 1-135, pls. i-v. 1864. Washington, 1865.

Primordial, Carboniferous, Permian, and Jurassic. Genera Camptonectes, Lioplacones, Eumicrotis, Chænomys. This work contains descriptions of new fresh-water Jurassic species, the first of that age discovered in North America. The work has additional importance in consequence of the philosophical discussion of important questions.

|                    | Page.  |
|--------------------|--------|
| Introduction ..... | VII-IX |

SILURIAN AGE. (POTSDAM OR PRIMORDIAL PERIOD.)

Mollusca.

Brachiopoda.

|                                                                |     |
|----------------------------------------------------------------|-----|
| <i>Lingulidae</i> .....                                        | 1   |
| <i>Lingulepis</i> , Hall, 1863 .....                           | 1-2 |
| <i>L. pinniformis</i> , Owen, 1852, pl. i, figs. 1 a, b.....   | 2-3 |
| <i>L. prima</i> (Conrad), Hall, 1847, pl. i, figs. 2 a, b..... | 3   |
| <i>Obolella</i> , Billings, 1861.....                          | 3-4 |
| <i>O. nana</i> , M. & H., 1861, pl. i, figs. 3 a-d.....        | 4   |

Gastropoda.

Pteropoda.

Thecosomata

|                                                          |     |
|----------------------------------------------------------|-----|
| <i>Cavolinidae</i> .....                                 | 4-5 |
| <i>Theca</i> , Sowerby, 1845 .....                       | 5   |
| <i>T. gregaria</i> , M. & H., 1861, figs. a-d, p. 5..... | 5-6 |

Articulata.

Crustacea.

Trilobita.

|                                                        |      |
|--------------------------------------------------------|------|
| <i>Paradoxidae</i> .....                               | 7    |
| <i>Agraulos</i> , Corda, 1847 .....                    | 7-9  |
| <i>A. oweni</i> , M. & H., 1861, figs. a-c, p. 9 ..... | 9-10 |
| <i>Agraulos</i> ——— ? pl. i, fig. 4 .....              | 10   |

CARBONIFEROUS AGE. (CARBONIFEROUS PERIOD.)

Protozoa.

Rhizopoda.

Foraminifera.

|                                                               |       |
|---------------------------------------------------------------|-------|
| <i>Camerinidae</i> .....                                      | 11-13 |
| <i>Fusulina</i> , Fischer, 1837 .....                         | 13-14 |
| <i>F. cylindrica</i> , Fischer, 1837, pl. i, figs. 6 a-i..... | 14-15 |

Mollusca.

Brachiopoda.

|                                                                          |       |
|--------------------------------------------------------------------------|-------|
| <i>Spiriferidae</i> .....                                                | 16    |
| <i>Spirifer</i> , Sowerby, 1815 .....                                    | 17-20 |
| <i>Trigonotreta</i> , Kœnig, = <i>Spirifer</i> of most authors.....      | 19    |
| <i>Martinia</i> , McCoy, = <i>Ambocœlia</i> , Hall .....                 | 19    |
| <i>S. (Martinia) plano-convexus</i> Shumard, 1855, figs. a-e, p. 21..... | 20-21 |
| <i>Productidae</i> .....                                                 | 21-22 |
| <i>Chonetes</i> , Fischer, 1837 .....                                    | 22    |
| <i>C. mucronata</i> , M. & H., 1858, pl. i, fig. 5, a-e .....            | 22-23 |
| <i>Strophomenidae</i> .....                                              | 23    |
| <i>Hemipronites</i> , Pander, 1830 .....                                 | 24-26 |
| <i>H. crassus</i> , M. & H., 1858, pl. i, fig. 7 a-d.....                | 26-27 |



|                                                                           | Page. |
|---------------------------------------------------------------------------|-------|
| <i>Lamellibranchiata.</i>                                                 |       |
| <i>Pteriidae</i> (= <i>Aviculidae</i> )                                   | 27-30 |
| <i>Pteriniinae</i> (or <i>Pterinia</i> group)                             | 28    |
| <i>Pterinae</i> (or <i>Avicularia</i> )                                   | 28    |
| <i>Melininae</i> ( <i>Perna</i> or <i>Isognomon</i> group)                | 28    |
| <i>Pteriniinae</i>                                                        | 30    |
| <i>Myalina</i> , Koninck, 1842                                            | 30-32 |
| Shell structure of <i>Myalina angulata</i> , fig. —                       | 31    |
| <i>M. perattemmata</i> , M. & H., 1858, pl. i, figs. 12 <i>a, b</i>       | 32    |
| <i>M. subquadrata</i> , Shumard, figs. <i>a, b</i> , p. 33                | 32-33 |
| <i>Crassatellida</i>                                                      | 34    |
| <i>Pleurophorus</i> , King, 1844                                          | 34-35 |
| Subgenus <i>Oleidophorus</i> , Hall, 1847                                 | 35    |
| <i>P. occidentalis</i> , M. & H., pl. i, figs. 11 <i>a, b</i>             | 35    |
| <i>Anatiniidae</i>                                                        | 36    |
| <i>Allorisma</i> , King, 1844                                             | 36-37 |
| <i>A. subcuneata</i> , M. & H., 1858, pl. i, figs. 10 <i>a, b</i>         | 37-38 |
| <i>Sedgwickia</i> , McCoy, 1844                                           | 38-40 |
| <i>S. topekaensis</i> ?, Shumard, 1858, figs. <i>a, b</i> , p. 40         | 40-41 |
| <i>S.?</i> <i>concava</i> , M. & H., 1858, pl. i, figs. 8 <i>a, b</i>     | 41    |
| <i>S.?</i> <i>altirostrata</i> , M. & H., 1858, pl. i, fig. 9             | 41-42 |
| * <i>Chaenomya</i> , n. g., Meek, 1865                                    | 42-43 |
| <i>C. leavenworthensis</i> , M. & H., 1858, pl. ii, figs. 1 <i>a-c</i>    | 43-44 |
| <i>C. cooperi</i> , M. & H., 1858, pl. ii, figs. 2 <i>a, b</i>            | 44    |
| <i>Gasteropoda.</i>                                                       |       |
| <i>Prosobranchiata.</i>                                                   |       |
| <i>Rhipidoglossata.</i>                                                   |       |
| <i>Podophthalma.</i>                                                      |       |
| <i>Pleurotomariidae</i>                                                   | 44-45 |
| <i>Pleurotomaria</i> , DeFrance, 1826                                     | 45-46 |
| <i>P. humerosa</i> , M. & H., 1858, pl. i, figs. 14 <i>a, b</i>           | 46-47 |
| <i>P. subturbinata</i> , M. & H., 1858, pl. i, fig. 13                    | 47    |
| CARBONIFEROUS AGE. (PERMIAN PERIOD.)                                      |       |
| <i>Mollusca.</i>                                                          |       |
| <i>Lamellibranchiata.</i>                                                 |       |
| <i>Pectinidae</i>                                                         | 48    |
| <i>Pectiniinae</i>                                                        | 48    |
| <i>Aviculo-pectiniinae</i>                                                | 49    |
| <i>Aviculopectiniinae</i>                                                 | 49    |
| <i>Aviculopecten</i> , McCoy, 1851                                        | 49    |
| <i>A. amplus</i> , M. & W., fig. —, p. 50                                 | 50    |
| <i>Aviculopecten</i> , —, pl. ii, fig. 10                                 | 50    |
| <i>A. macoyi</i> , pl. ii, fig. 9                                         | 50-51 |
| <i>Pteriidae.</i>                                                         |       |
| <i>Pteriniinae</i>                                                        | 51    |
| <i>Myalina</i> , Koninck, 1842                                            | 51    |
| <i>M. aviculoides</i> , M. & H., 1860, pl. ii, figs. 8 <i>a-d</i>         | 51-52 |
| <i>M. permiana</i> , Swallow, 1858, pl. ii, figs. 7 <i>a-c</i>            | 52    |
| <i>Pterinae.</i>                                                          |       |
| <i>Eumicrotis</i> , Meek, 1864                                            | 53-54 |
| <i>E. hawni</i> , M. & H., pl. ii, figs. 5 <i>a-c</i> , and fig. 1, p. 54 | 54-55 |
| Shell structure of <i>E. curta</i> , No. 2, p. —                          | 54    |
| <i>E. hawni</i> var. <i>ovata</i> , pl. ii, figs. 5 <i>a, b</i>           | 55    |
| <i>Melininae.</i>                                                         |       |
| <i>Bakevelliia</i> , King, 1848                                           | 57    |
| <i>B. parva</i> , M. & H., 1858, pl. ii, figs. 12 <i>a, b</i>             | 57    |
| <i>Trigoniidae</i>                                                        | 57-58 |
| <i>Schizodus</i> , King, 1846                                             | 58-59 |
| <i>S. ovatus</i> , M. & H., 1858, pl. ii, figs. 11 <i>a, b</i>            | 59    |
| <i>Nuculanidae.</i>                                                       | 59-60 |
| <i>Nuculaninae</i>                                                        | 60    |
| <i>Malletinae</i>                                                         | 60    |

|                                                                                                                    | Page. |
|--------------------------------------------------------------------------------------------------------------------|-------|
| <i>Nuculaninae</i> .....                                                                                           | 60    |
| <i>Toldia</i> , Möller, 1842.....                                                                                  | 60    |
| <i>I. ? subscitula</i> , M. & H., 1858, pl. ii, figs. 4 <i>a</i> , <i>b</i> .....                                  | 60-61 |
| <i>Crassatellidae</i> .....                                                                                        | 61    |
| <i>Pleurophorus</i> , King, 1844.....                                                                              | 61    |
| <i>P. ? subcuneatus</i> , M. & H., 1858, pl. ii, fig. 3.....                                                       | 61    |
| <i>P. ? calhouni</i> , M. & H., 1858, pl. ii, figs. 13 <i>a</i> , <i>b</i> .....                                   | 62    |
| <i>Cephalopoda</i> .....                                                                                           |       |
| <i>Tetrabanchiata</i> .....                                                                                        |       |
| <i>Nautilidae</i> .....                                                                                            | 63-64 |
| <i>Nautilus</i> , Linnæus, 1758.....                                                                               | 64-65 |
| <i>N. eccentricus</i> , M. & H., pl. ii, figs. 14 <i>a</i> , <i>b</i> .....                                        | 65    |
| REPTILIAN AGE. (JURASSIC PERIOD.)                                                                                  |       |
| <i>Radiata</i> .....                                                                                               |       |
| <i>Echinodermata</i> .....                                                                                         |       |
| <i>Crinoidea</i> .....                                                                                             |       |
| <i>Pentacrinidae</i> .....                                                                                         |       |
| <i>Pentacrinites</i> , Miller, 1821.....                                                                           | 66    |
| <i>Chladocrinus</i> or <i>Cladocrinus</i> [Agassiz].....                                                           | 66    |
| <i>Pentacrinus asteriscus</i> , M. & H., 1858, pl. iii, figs. 2 <i>a</i> , <i>b</i> and fig. —, p. 67.....         | 67    |
| <i>Mollusca</i> .....                                                                                              |       |
| <i>Brachiopoda</i> .....                                                                                           |       |
| <i>Lingulidae</i> .....                                                                                            | 68    |
| <i>Lingula</i> , Bruguière, 1792.....                                                                              | 68-69 |
| <i>L. brevirostris</i> , M. & H., 1858, pl. iii, figs. 3 <i>a</i> , <i>b</i> .....                                 | 69    |
| <i>Rhynchonellidae</i> .....                                                                                       | 70    |
| <i>Rhynchonella</i> , Fischer, 1809.....                                                                           | 70-71 |
| <i>Rhynchonella</i> , ———, pl. iii, fig. 4.....                                                                    | 71-72 |
| <i>Lamellibranchiata</i> .....                                                                                     |       |
| <i>Ostreidae</i> .....                                                                                             | 72    |
| <i>Ostrea</i> , Linnæus, 1758.....                                                                                 | 72-73 |
| <i>O. engelmanni</i> , Meek, 1860, figs. A, B, p. 73.....                                                          | 73-74 |
| <i>Gryphæa</i> , Lamarek, 1801.....                                                                                | 74    |
| <i>G. calceola</i> var. <i>nebrascensis</i> , M. & H., 1861, pl. iii, figs. 1 <i>a-e</i> and figs. A-E, p. 75..... | 74-76 |
| <i>Pectinidae</i> .....                                                                                            | 76    |
| <i>Pectininae</i> .....                                                                                            | 76    |
| <i>Camptonectes</i> , Agassiz, 1865.....                                                                           | 76-77 |
| <i>C. bellistriatus</i> , Meek, 1860, figs. A-D, p. 77.....                                                        | 77-78 |
| <i>C. ? extenuatus</i> , M. & H., 1860, pl. iii, fig. 6.....                                                       | 78    |
| <i>Pteriidae</i> .....                                                                                             | 79    |
| <i>Pterinea</i> .....                                                                                              | 79    |
| <i>Pteria</i> , Scopoli, 1777.....                                                                                 | 79    |
| Subgenus <i>Oxytoma</i> , n. s. g., Meek, 1865.....                                                                | 79-80 |
| <i>Pteria (Oxytoma) munsteri</i> , Bronn, 1829, figs. A, B, p. 80.....                                             | 80-81 |
| <i>Eumicrotis</i> , Meek, 1864.....                                                                                | 81    |
| <i>E. curta</i> , Hall, 1852, pl. iii, figs. 10 <i>a-d</i> .....                                                   | 81    |
| <i>Trigoniidae</i> .....                                                                                           | 82    |
| <i>Trigonia</i> , Bruguière, 1789.....                                                                             | 82-83 |
| Subdivisions:                                                                                                      |       |
| <i>Les Scaphoides</i> , Agassiz. (Jurassic and Cretaceous.)                                                        |       |
| <i>Les Clavelles</i> , Agassiz. (Mainly Jurassic.)                                                                 |       |
| <i>Les Carrees</i> , Agassiz. (Upper Jurassic and Cretaceous.)                                                     |       |
| <i>Les Scabres</i> , Agassiz. (Mainly Cretaceous.)                                                                 |       |
| <i>Les Ondulees</i> , Agassiz. (Jurassic and Cretaceous.)                                                          |       |
| <i>Les Costees</i> , Agassiz. (Jurassic and Cretaceous.)                                                           |       |
| <i>Les Lissees</i> , Agassiz. (Jurassic and Cretaceous.)                                                           |       |
| <i>Les Pectinacees</i> , Agassiz. (Existing seas.)                                                                 |       |
| <i>Trigonia conradi</i> , M. & H., 1860, pl. iii, fig. 11.....                                                     | 83-84 |
| <i>Mytilidae</i> .....                                                                                             | 84    |
| <i>Volcella</i> , Scopoli, 1777.....                                                                               | 85-86 |
| <i>V. pertenuis</i> , M. & H., 1858, pl. iii, figs. 5, 5 <i>a</i> .....                                            | 86    |
| <i>V. formosa</i> , M. & H., 1861, figs. A, B, p. 87.....                                                          | 86-87 |
| <i>Arcidae</i> .....                                                                                               | 87-89 |
| <i>Arcine</i> .....                                                                                                | 88    |

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| <i>Macrodon tinæ</i> .....                                           | 88      |
| <i>Acininar</i> .....                                                | 88      |
| <i>Macrodon tinæ</i> .....                                           | 89      |
| <i>Grammatodon</i> , M. & H., 1858.....                              | 89      |
| <i>G. inornatus</i> , M. & H., 1858, pl. iii, figs. 9, 9 a, 9 b..... | 90      |
| <i>Unionida</i> .....                                                | 90-91   |
| <i>Unio</i> , Retzius, 1788.....                                     | 92      |
| <i>U. nivalis</i> , M. & H., 1858, pl. iii, figs. 13 a-c.....        | 92-93   |
| <i>Crassatellida</i> .....                                           | 93      |
| <i>Astarte</i> , Sowerby, 1816.....                                  | 93-94   |
| <i>A. fragilis</i> , M. & H., 1860, pl. iv, fig. 7.....              | 94      |
| <i>A. inornata</i> , M. & H., 1860, pl. iii, figs. 12 a, b.....      | 94      |
| <i>Tancrediida</i> .....                                             | 95      |
| <i>Tancredia</i> , Lyeett, 1850.....                                 | 95-96   |
| <i>T. warrenana</i> , M. & H., 1860, pl. iii, fig. 7.....            | 96      |
| <i>T. equilateralis</i> , M. & H., 1860, pl. iii, fig. 8.....        | 96-97   |
| <i>Cardiida</i> .....                                                | 97      |
| <i>Protocardia</i> , Beyrich, 1845.....                              | 97-98   |
| <i>P. shumardi</i> , M. & H., 1860, figs. A, B on p. 98.....         | 98-99   |
| <i>Anatinida</i> .....                                               | 99      |
| <i>Myacites</i> (Schlot.), Munster, 1840.....                        | 99-100  |
| <i>M. nebrascensis</i> , M. & H., 1860, pl. iv, fig. 5.....          | 100-101 |
| <i>M. subellipticus</i> , M. & H., 1858, pl. iv, figs. 6 a-c.....    | 101     |
| <i>Thracia</i> , Leach, 1819.....                                    | 101-102 |
| <i>T. ? sublaevis</i> , M. & H., 1860, pl. iv, figs. 4, 4 a.....     | 102     |
| <i>T. ? arcuata</i> , M. & H., 1860, pl. iv, fig. 8.....             | 102     |
| <i>Pholadomya</i> , Sowerby, 1823.....                               | 102-103 |

*Section I.—Species without a circumscribed cardinal area.*

- Multicostatae*, Agassiz. (Jurassic and Cretaceous.)  
*Trigonatae*, Agassiz. (Cretaceous, Tertiary, and Recent.)  
*Bucardinae*, Agassiz. (Lias to Tertiary.)

*Section II.—Species with a circumscribed cardinal area.*

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| <i>Flabellate</i> , Agassiz. (Jurassic.)                                        |         |
| <i>Orales</i> , Agassiz. (Jurassic.)                                            |         |
| <i>Cardissoides</i> , Agassiz. (Jurassic.)                                      |         |
| <i>Pholadomya humilis</i> , M. & H., 1860, pl. iv, figs. 3, a, b.....           | 104     |
| <i>Gasteropoda</i> .                                                            |         |
| <i>Pulmonifera</i> .                                                            |         |
| <i>Inoperculata</i> .                                                           |         |
| <i>Limnophila</i> .                                                             |         |
| <i>Limnæida</i> .....                                                           | 105-106 |
| <i>Limnæinae</i> .....                                                          | 105     |
| <i>Physinae</i> .....                                                           | 105     |
| <i>Planorbinae</i> .....                                                        | 105     |
| <i>Planorbis</i> , Müller, 1774.....                                            | 106     |
| <i>Planorbella</i> , Haldeman.....                                              | 106     |
| <i>Helisoma</i> , Swainson.....                                                 | 107     |
| <i>Taphius</i> , H. & A. Adams.....                                             | 107     |
| <i>Menetus</i> , H. & A. Adams.....                                             | 107     |
| <i>Anisus</i> , Fitzinger.....                                                  | 107     |
| <i>Bathymorphalus</i> , Agassiz (= <i>Spirorbis</i> , Swainson, not Lamk.)..... | 107     |
| <i>Gyraulius</i> , Agassiz (= <i>Nautilina</i> , Stein).....                    | 107     |
| <i>Planorbis veteris</i> , M. & H., 1860, pl. iv, figs. 1 & 1 a, b.....         | 107     |
| <i>Prosobranchiata</i> .                                                        |         |
| <i>Rhipidoglossata</i> .                                                        |         |
| <i>Podophtalma</i> .                                                            |         |
| <i>Neritida</i> .....                                                           | 108     |
| <i>Neritella</i> , Humphrey, 1797.....                                          | 108-109 |
| <i>N. nebrascensis</i> , M. & H., 1861, figs. —, on p. 109.....                 | 109-110 |
| <i>Cyclobranchiata</i> .                                                        |         |
| <i>Dentalium</i> .....                                                          | 110     |
| <i>Dentalium</i> , Lin., 1740.....                                              | 111     |
| <i>D. subquadratum</i> , Meek, 1860, fig. —, p. 111.....                        | 111     |
| <i>Ctenobranchiata</i> (= <i>Pectinibranchiata</i> ).                           |         |

*Rostrifera.*

*Valvatidæ.*

|                                                                                                          |         |
|----------------------------------------------------------------------------------------------------------|---------|
| <i>Valvata</i> , Müller, 1774 .....                                                                      | 112     |
| <i>Valvata</i> (proper) = <i>Gyrorbis</i> , Fitzinger, = <i>Planella</i> , Schlut. ....                  | 112     |
| <i>Tropidina</i> , H. & A. Adams .....                                                                   | 112-113 |
| Subgenus <i>Tropidina</i> , H. & A. Adams .....                                                          | 113     |
| <i>Valvata</i> ? ( <i>Tropidina</i> ) <i>scabrida</i> , M. & H., 1860, pl. iv, figs. 2 <i>a, b</i> ..... | 113     |
| <i>Viviparidæ</i> .....                                                                                  | 113-114 |
| <i>Viviparus</i> , Montfort, 1810 .....                                                                  | 114-115 |
| <i>V. gilli</i> , pl. v, figs. 3 <i>a, b</i> .....                                                       | 115     |
| <i>Lioplacodes</i> , Meek, 1864 .....                                                                    | 115-116 |
| <i>L. veterinus</i> , M. & H., 1861, figs. —, p. 116 .....                                               | 116     |

*Cephalopoda.*

*Tetrabranchiata.*

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| <i>Ammonitidæ</i> .....                                                         | 116-118 |
| <i>Trigonellites</i> , Parkinson, 1811, fig. 1, p. 119, figs. 2-4, p. 120 ..... | 118-120 |
| <i>Ammonites</i> , Bruguière, 1789 .....                                        | 121-122 |
| <i>A. cordiformis</i> , M. & H., 1858, pl. v, figs. 2 <i>a-e</i> .....          | 122-123 |
| <i>A. henryi</i> , M. & H., 1858, pl. iv, figs. 9 <i>a-c</i> .....              | 123-124 |

*Dibranchiata.*

*Decapoda.*

|                                                                                                                |         |
|----------------------------------------------------------------------------------------------------------------|---------|
| <i>Belemnitidæ</i> .....                                                                                       | 124     |
| <i>Belemnites</i> , Auct. ....                                                                                 | 124-125 |
| <i>Acœli</i> , Bronn .....                                                                                     | 125     |
| <i>Gastrocoeli</i> , D'Orbigny = <i>Notosiphites</i> , Duval .....                                             | 125     |
| <i>Notocoeli</i> , D'Orbigny = <i>Gastrosiphites</i> , Duval .....                                             | 125     |
| <i>Belemnites densus</i> , M. & H., 1858, pl. iv, figs. 10 <i>a-c</i> , and pl. v, figs. 1, 1 <i>a-h</i> ..... | 126-127 |

*Articulata.*

*Annulata.*

*Tubicola.*

|                                            |         |
|--------------------------------------------|---------|
| <i>Serpulidæ</i> .....                     | 137     |
| <i>Serpula</i> , Linnæus, 1758 .....       | 127-128 |
| <i>Serpula</i> , undt. pl. v, fig. 4 ..... | 128     |

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|                                                                                                   |         |
|---------------------------------------------------------------------------------------------------|---------|
| <i>Amussium</i> (Klein), Bolton, 1798 .....                                                       | 478     |
| Subgenus <i>Entolium</i> , Meek .....                                                             | 478     |
| <i>A. aurarium</i> , n. s., Meek, 1865, pl. i, figs. 6 and 6 <i>a</i> .....                       | 478-479 |
| <i>Aucella</i> , Keyserling, 1843 .....                                                           | 479     |
| <i>A. erringtoni</i> , Gabb, sp., 1864, pl. i, figs. 2, 3, 7, 5, <i>a-d</i> .....                 | 479-480 |
| <i>A. erringtoni</i> , var. <i>linguiformis</i> , Meek, 1865, pl. i, figs. 1 and 1 <i>a</i> ..... | 481     |
| <i>Pholadomya</i> , Sowerby, 1823 .....                                                           | 481     |
| <i>Pholadomya</i> (?) <i>orbiculata</i> , Gabb, pl. i, fig. 4 .....                               | 481     |
| <i>Belemnites</i> , Auct. ....                                                                    | 482     |
| <i>Belemnites pacificus</i> , Gabb .....                                                          | 482     |

31.

MEEK, F. B. Remarks on the Carboniferous and Cretaceous Rocks of Eastern Kansas and Nebraska, and their relations to those of the adjacent States, and other localities farther eastward, in connection with a review of a paper recently published on this subject by M. Jules Marcou, in the Bulletin of the Geological Society of France. <Am. Journ. Sci., vol. xxxix, 2d ser., pp. 157-174. 1865. New Haven, 1865.

The paper of Professor Marcou's referred to is the "Reconnaissance geologique du Nebraska," par Jules Marcou. Bull. Geol. Soc. France, xxi, pp. 132-147, January, 1864.

At the close of the paper Meek & Worthen describe:

|                                                              |     |
|--------------------------------------------------------------|-----|
| <i>Erisocrinus</i> , n. g., M. & W., 1865 .....              | 174 |
| <i>Erisocrinus typus</i> , n. s., M. & W., 1865 .....        | 174 |
| <i>Erisocrinus nebrascensis</i> , n. s., M. & W., 1865 ..... | 174 |



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The authors regard their genus *Erisocrinus* as identical with *Philocrinus* de Koninck. *Erisocrinus typus* is changed to *Philocrinus pelvis*, M. & W.  
*E. nebrascensis* to *P. nebrascensis*.

## 33.

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## Upper Silurian.

|                                                   | Page. |
|---------------------------------------------------|-------|
| <i>Zaphrentis haysii</i> , n. s., Meek, 1865..... | 32    |
| <i>Syringopora</i> , sp. undt.....                | 32    |
| <i>Favosites</i> , sp. undt.....                  | 32    |
| <i>Strophomena rhomboidalis</i> , Wahlb.....      | 33    |
| <i>Strophodonta headleyana</i> , Hall?.....       | 33    |
| <i>Strophodonta beckii</i> , Hall?.....           | 33    |
| <i>Rhynchonella</i> , sp. undt.....               | 33    |
| <i>Coelospira concava</i> , Hall.....             | 33    |
| <i>Spirifer</i> , sp. undt.....                   | 33    |
| <i>Loxonema? kanei</i> , n. s., 1865, Meek.....   | 33    |
| <i>Orthoceras</i> , sp. undt.....                 | 33    |
| <i>Illeenus</i> , sp. undt.....                   | 33    |

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MEEK, F. B. Note on the genus *Gilbertocrinus* Phillips. <Proc. Acad. Nat. Sci. Phila., vol. xvii, pp. 166-167. 1865. Philadelphia, 1865.

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MEEK, F. B. Observations on the microscopic shell structure of *Spirifer cuspidatus*, Sowerby, and some similar American forms. <Proc. Acad. Nat. Sci. Phila., vol. xvii, pp. 275-277. 1865. Philadelphia.

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## CRUSTACEA.

*Entomostraca.**Xyphosura.*

|                                            | Page. |
|--------------------------------------------|-------|
| <i>Bellinurus</i> , Koenig.....            | 43    |
| <i>B. danæ</i> , M. & W., n. s., 1865..... | 44-45 |

*Tetradecapoda.**Isopoda.**(Anisopoda.)**Acanthotelsonidae.*

|                                                  |       |
|--------------------------------------------------|-------|
| <i>Acanthotelson</i> , n. g., M. & W., 1865..... | 46-47 |
| <i>A. stimpsonii</i> , n. s., M. & W., 1865..... | 47-48 |
| <i>A. inequalis</i> , n. s., M. & W., 1865.....  | 48    |

|                                                    | Page. |
|----------------------------------------------------|-------|
| <i>Palæocaridae.</i>                               |       |
| <i>Palæocaris</i> n. g., M. & W., 1865 .....       | 48-49 |
| <i>P. typus</i> , n. s., M. & W., 1865 .....       | 49-50 |
| <i>Decapoda,</i>                                   |       |
| <i>Macrura.</i>                                    |       |
| ? <i>Anthrapalæmon</i> , Salter, 1861 .....        | 50    |
| <i>A. gracilis</i> , n. s., M. & W., 1865 .....    | 50-51 |
| <i>Myriapoda.</i>                                  |       |
| ? <i>Anthracerpes</i> , n. g., M. & W., 1865 ..... | 51    |
| <i>A. typus</i> , n. s., M. & W., 1865 .....       | 51-52 |
| <i>Insecta.</i>                                    |       |
| <i>Lepidoptera.</i>                                |       |
| <i>Palæocampa</i> , n. g., M. & W., 1865 .....     | 52    |
| <i>P. anthrax</i> , n. s., M. & W., 1865 .....     | 52-53 |

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MEEK, F. B., and WORTHEN, A. H. Remarks on the genus *Taxocrinus* (Phillips). McCoy, 1844; and its relations to *Forbesiocrinus* de Koninek and Le Hon, 1854, with descriptions of new species. < Proc. Acad. Nat. Sci. Phila., vol. xvii, pp. 138-143. 1865. Philadelphia, 1865.

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|                                                                                                 | Page.   |
|-------------------------------------------------------------------------------------------------|---------|
| <i>Taxocrinus</i> (Phillips) McCoy, 1844 .....                                                  | 138-142 |
| Table showing the gradations of structure from <i>Taxocrinus</i> to <i>Forbesiocrinus</i> ..... | 140     |
| <i>T. gracilis</i> , n. s., M. & W., 1865 .....                                                 | 142-143 |

38.

MEEK, F. B., and WORTHEN, A. H. Descriptions of new species of Crinoidea, &c., from the Paleozoic rocks of Illinois and some of the adjoining States. < Proc. Acad. Nat. Sci. Phila., vol. xvii, pp. 143-155. 1865. Philadelphia, 1865.

A "note in regard to the name *Cincinnati* group used in the foregoing paper" is appended on page 155; the descriptions are republished and the views restated in the Illinois Geological Reports, vol. i.

*Radiata.*

*Echinodermata.*

*Cystidea.*

|                                                                       | Page.   |
|-----------------------------------------------------------------------|---------|
| <i>Comarocystites</i> , Billings, 1854 .....                          | 143     |
| <i>C. shumardi</i> , n. s., M. & W., 1865 .....                       | 143-144 |
| <i>C. shumardi</i> var. <i>obconicus</i> , n. s., M. & W., 1865 ..... | 144-145 |

*Crinoidea.*

|                                                                   |          |
|-------------------------------------------------------------------|----------|
| <i>Porocrinus</i> , Billings, 1856 .....                          | 145      |
| <i>P. crassus</i> , n. s., M. & W., 1865 .....                    | 145-146  |
| <i>P. pentagonius</i> , n. s., M. & W., 1865 .....                | 146-147  |
| <i>Heterocrinus</i> , Hall, 1847 .....                            | 147      |
| <i>H. crassus</i> , n. s., M. & W., 1865 .....                    | 147-148  |
| <i>H. subcrassus</i> , n. s., M. & W., 1865 .....                 | 148, 149 |
| Subgenus <i>Anomalocrinus</i> , M. & W. ....                      | 148-149  |
| <i>H. ? (Anomalocrinus) incurvus</i> , n. s., M. & W., 1865 ..... | 148-149  |
| <i>Erisocrinus</i> , n. g., M. & W., 1865 .....                   | 149      |
| <i>E. conoideus</i> , n. s., M. & W., 1865 .....                  | 150      |
| <i>E. tuberculatus</i> , n. s., M. & W., 1865 .....               | 150      |
| <i>Cyathocrinus</i> , Miller, 1821 .....                          | 150      |
| <i>C. quinquelobus</i> , n. s., M. & W., 1865 .....               | 150-151  |
| <i>C. subturnidus</i> , n. s., M. & W., 1865 .....                | 151-152  |
| <i>C. enormis</i> , M. & W., 1861 .....                           | 152      |
| <i>Potriocrinus</i> , Miller, 1821 .....                          | 152      |
| <i>P. (Zeacrinus) carbonarius</i> , M. & W., 1861 .....           | 152      |
| <i>Actinocrinus</i> , Miller, 1821 .....                          | 152      |
| <i>A. pistillus</i> , M. & W., n. s., 1865 .....                  | 152-154  |
| Subgenus <i>Sphærocrinus</i> , M. & W., 1865 .....                | 154      |
| <i>A. (Sphærocrinus) concavus</i> , M. & W., 1861 .....           | 154      |

## Mollusca.

## Cephalopoda.

|                                                         |                  |
|---------------------------------------------------------|------------------|
| <i>Goniatites compactus</i> , n. s., M. & W., 1865..... | Page.<br>154-155 |
|---------------------------------------------------------|------------------|

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|                                                                            |              |
|----------------------------------------------------------------------------|--------------|
| <i>Poteriocrinus</i> , Miller, 1821 .....                                  | Page.<br>155 |
| <i>P. indianensis</i> , n. s., M. & W., 1865 .....                         | 155-156      |
| <i>P. (Scaphiocrinus) tenuidactylus</i> , n. s., M. & W., 1865 .....       | 156-157      |
| <i>P. (Scaphiocrinus) bayensis</i> , n. s., M. & W., 1865 .....            | 157-158      |
| <i>P. (Scaphiocrinus) ? norwoodi</i> , n. s., M. & W., 1865 .....          | 158-159      |
| <i>P. (Scaphiocrinus) subtumidus</i> , n. s., M. & W., 1865 .....          | 159          |
| <i>Cyathocrinus</i> , Miller, 1821 .....                                   | 160          |
| <i>C. arboreus</i> , n. s., M. & W., 1865 .....                            | 160          |
| <i>Platyerinus</i> , Miller, 1821 .....                                    | 160-162      |
| <i>Centrocrinus</i> , Austin .....                                         | 161          |
| <i>Cupellæocrinus</i> , Troost .....                                       | 161          |
| <i>Pleurocrinus</i> , Austin .....                                         | 161          |
| <i>Platyerinus niotensis</i> , n. s., M. & W., 1865 .....                  | 162          |
| <i>P. hemisphericus</i> , n. s., M. & W., 1865 .....                       | 162-163      |
| <i>P. parvulus</i> , n. s., M. & W., 1865 .....                            | 163-164      |
| <i>Actinocrinus</i> , Miller, 1821 .....                                   | 164          |
| Subgenus <i>Alloprosallocrinus</i> , Lyon & Casseday, 1860 .....           | 164          |
| <i>A. (Alloprosallocrinus) euconus</i> , n. s., M. & W., 1865 .....        | 164-165      |
| <i>Pentremites (Granatocrinus) granulatus</i> , n. s., M. & W., 1865 ..... | 165          |

## POLYZOA.

|                                                  |              |
|--------------------------------------------------|--------------|
| <i>Eractinopora</i> , n. g., M. & W., 1865 ..... | Page.<br>165 |
| <i>E. radiata</i> , n. s., M. & W., 1865 .....   | 165-166      |

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## Mollusca.

## Lamellibranchiata.

|                                                                     |              |
|---------------------------------------------------------------------|--------------|
| <i>Lithophaga</i> , Bolten, 1798 .....                              | Page.<br>245 |
| ( <i>Lithodomus</i> , Cuvier, 1817.) .....                          | 245          |
| <i>Lithophaga ? pertenuis</i> , n. s., M. & W., 1865 .....          | 245          |
| <i>L. ? lingualis</i> Phillips (?), sp. ....                        | 245          |
| <i>Modiolopsis</i> , Hall, 1847 .....                               | 246          |
| <i>M. perovata</i> , n. s., M. & W., 1865 .....                     | 246          |
| <i>Pleurophorus</i> , King, 1844 .....                              | 246          |
| <i>P. subcostatus</i> , n. s., M. & W., 1865 .....                  | 246-247      |
| <i>P. ? angulatus</i> , n. s., M. & W., 1865 .....                  | 247          |
| <i>P. costatiformis</i> , n. s., M. & W., 1865 .....                | 247-248      |
| <i>Grammysia</i> , De Verneuil, 1847 .....                          | 248          |
| <i>G. ? rhomboidalis</i> , n. s., M. & W., 1865 .....               | 248-249      |
| <i>Conocardium</i> , Bronn, 1837 .....                              | 249          |
| <i>O. obliquum</i> , n. s., M. & W., 1865 .....                     | 249          |
| <i>Edmondia</i> , De Koninck, 1842 .....                            | 249          |
| <i>E. ? peroblonga</i> , n. s., M. & W., 1865 .....                 | 249-250      |
| <i>Chænomya</i> , Meek, 1865 .....                                  | 250          |
| <i>C. ? rhomboidea</i> , n. s., M. & W., 1865 .....                 | 250          |
| <i>C. ? hybrida</i> , n. s., M. & W., 1865 .....                    | 250-251      |
| <i>Sedgwickia</i> , McCoy, 1844 .....                               | 251          |
| <i>S. (Sanguinolites ?) subarcuata</i> , n. s., M. & W., 1865 ..... | 251          |

*Gasteropoda.*

|                                                            |         |
|------------------------------------------------------------|---------|
| <i>Iloopea</i> , Hall, 1847 .....                          | 251     |
| Subgenus <i>Isonema</i> , M. & W. ....                     | 221     |
| <i>H. (Isonema) depressa</i> , n. s., M. & W., 1865 .....  | 251-252 |
| <i>Pleurotomaria</i> , DeFrance, 1825 .....                | 252     |
| <i>P. (Murchisonia?) meta</i> , n. s., M. & W., 1865 ..... | 252     |

*Pteropoda.*

|                                                      |         |
|------------------------------------------------------|---------|
| <i>Conularia</i> , Miller, 1818 .....                | 252     |
| <i>C. multicosata</i> , n. s., M. & W., 1865 .....   | 252-253 |
| <i>C. subcarbonaria</i> , n. s., M. & W., 1865 ..... | 253     |
| <i>C. whitei</i> , n. s., M. & W., 1865 .....        | 253-254 |
| <i>Tentaculites</i> , Schiotheim, 1820 .....         | 254     |
| <i>T. tenuistriatus</i> , n. s., M. & W., 1865 ..... | 254     |
| <i>T. oswegoensis</i> , n. s., M. & W., 1865 .....   | 254-255 |
| <i>T. sterlingensis</i> , n. s., M. & W., 1865 ..... | 255     |

*Cephalopoda.*

|                                                                             |         |
|-----------------------------------------------------------------------------|---------|
| <i>Orthoceras</i> , Auct .....                                              | 255     |
| <i>O. crebristriatum</i> , n. s., M. & W., 1865 .....                       | 255-256 |
| <i>O. subbaculum</i> , n. s., M. & W., 1865 .....                           | 256     |
| <i>O. jolietense</i> , n. s., M. & W., 1865 .....                           | 256     |
| <i>O. nobile</i> , n. s., M. & W., 1865 .....                               | 256-257 |
| <i>O. winchellii</i> , n. s., M. & W., 1865 .....                           | 257     |
| <i>Phragmoceras</i> , Broderip, 1831 .....                                  | 257     |
| <i>P. walshii</i> , n. s., M. & W., 1865 .....                              | 257     |
| <i>Gomphoceras</i> , Sowerby, 1839 .....                                    | 258     |
| <i>G. sacculum</i> , n. s., M. & W., 1865 .....                             | 258     |
| <i>G. (Apiceras) turbiniforme</i> , n. s., M. & W., 1865 .....              | 258-259 |
| <i>Nautilus</i> , Linnaeus, 1758 .....                                      | 259     |
| Subgenus <i>Endolobus</i> , M. & W., 1865 .....                             | 259     |
| <i>N. (Endolobus) peramplus</i> , n. s., M. & W., 1865 .....                | 259     |
| <i>N. (Temnocheilus) niotensis</i> , n. s., M. & W., 1865 .....             | 260     |
| Subgenus <i>Discites</i> , McCoy, 1844 .....                                | 260     |
| <i>N. (Discites) ornatus</i> Hall, var. <i>amplus</i> , M. & W., 1865 ..... | 260-261 |
| <i>N. (Discites) disciformis</i> , n. s., M. & W., 1865 .....               | 261     |
| <i>N. lasallensis</i> , n. s., M. & W., 1865 .....                          | 261-262 |
| Subgenus <i>Cryptoceras</i> , d'Orbigny, 1847 .....                         | 262     |
| <i>N. (Cryptoceras) cupax</i> , n. s., M. & W., 1865 .....                  | 262     |
| <i>N. (Cryptoceras?) leidyi</i> , n. s., M. & W., 1865 .....                | 262-263 |
| <i>Trochoceras</i> , Barrande, 1847 .....                                   | 263     |
| <i>T. baeri</i> , n. s., M. & W., 1865 .....                                | 263-264 |

*Articulata.*

*Crustacea.*

*Trilobita.*

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| <i>Dalmania</i> , Emmerich, 1845 .....                               | 261     |
| <i>D. danae</i> , n. s., M. & W., 1865 .....                         | 261-266 |
| <i>Lichas</i> , Dalman, 1827 .....                                   | 266     |
| <i>L. cucullus</i> , n. s., M. & W., 1865 .....                      | 266-267 |
| <i>Proetus</i> Steininger, 1830 .....                                | 267     |
| <i>P. ellipticus</i> , n. s., M. & W., 1865 .....                    | 267-268 |
| <i>Phillipsia</i> , Portlock, 1843 .....                             | 268     |
| Subgenus <i>Griffithides</i> , Portlock, 1843 .....                  | 268     |
| <i>P. (Griffithides) portlockii</i> , n. s., M. & W., 1865 .....     | 268-270 |
| <i>P. (Griffithides) scitula</i> , n. s., M. & W., 1865 .....        | 270-271 |
| <i>P. (Griffithides?) sangamonensis</i> , n. s., M. & W., 1865 ..... | 271-273 |



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#### Radiata.

##### Echinodermata.

##### Crinoidea.

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| <i>Belemnoocrinus whitii</i> , n. s., M. & W., 1866.....             | 251     |
| Subgenus <i>Nematoocrinus</i> , M. & W. 1866.....                    | 251     |
| <i>Synbathocrinus wachsmuthi</i> , n. s., M. & W., 1866.....         | 251-252 |
| <i>Cyathocrinus farleyi</i> , n. s., M. & W., 1866.....              | 252-253 |
| <i>Actinoocrinus calyculus</i> var. <i>pardinensis</i> , M. & W..... | 253     |
| <i>Strotocrinus</i> , n. g., M. & W., 1866.....                      | 253     |
| <i>Steganoocrinus</i> , n. g., M. & W., 1866.....                    | 253-254 |
| <i>Rhodocrinus nanus</i> , n. s., M. & W., 1866.....                 | 254     |
| <i>Onychocrinus</i> , Lyon & Casseday.....                           | 255-256 |
| <i>Onychocrinus diversus</i> , n. s., M. & W., 1866.....             | 256-257 |
| <i>Granatoocrinus shumardi</i> , n. s., M. & W., 1866.....           | 257-258 |
| <i>Granatoocrinus norwoodi</i> , O. & S. ?.....                      | 258-259 |

##### Asteroidea.

|                                                          |     |
|----------------------------------------------------------|-----|
| <i>Schænaster wachsmuthi</i> , n. s., M. & W., 1866..... | 259 |
|----------------------------------------------------------|-----|

#### Mollusca.

##### Lamellibranchiata.

|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| <i>Pteria</i> ( <i>Pterinea</i> ?) <i>morganensis</i> , n. s., M. & W., 1866..... | 259-260 |
| <i>Dolabra sterlingensis</i> , n. s., M. & W., 1866.....                          | 260-261 |
| <i>Macrodon micronema</i> , n. s., M. & W., 1866.....                             | 261     |

##### Gasteropoda.

|                                                                                    |         |
|------------------------------------------------------------------------------------|---------|
| <i>Platyceras</i> , Conrad, 1840.....                                              | 262-263 |
| Subgenus <i>Orthonychia</i> , Hall.....                                            | 263     |
| Subgenus <i>Igoceras</i> , Hall.....                                               | 263     |
| <i>P. lævigatum</i> , n. s., M. & W., 1866.....                                    | 263-264 |
| <i>P. haliotoides</i> , n. s., M. & W., 1866.....                                  | 264     |
| <i>P. uncum</i> , n. s., M. & W., 1866.....                                        | 264-265 |
| <i>P.</i> ( <i>Orthonychia</i> ) <i>chesterense</i> , n. s., M. & W. 1866.....     | 265     |
| <i>P.</i> ( <i>Orthonychia</i> ) <i>subplicatum</i> , n. s., M. & W., 1866.....    | 265-266 |
| <i>P.</i> ( <i>Orthonychia</i> ) <i>infundibulum</i> , n. s., M. & W., 1866.....   | 266     |
| <i>Metoptoma</i> , Phillips, 1836.....                                             | 266-267 |
| <i>Metoptoma</i> ( <i>Platyceras</i> ?) <i>umbella</i> , n. s., M. & W., 1866..... | 267     |
| <i>Polyphemopsis chrysallis</i> , n. s., M. & W., 1866.....                        | 267-268 |
| <i>Naticopsis littonana</i> var. <i>genevievensis</i> , M. & W.....                | 268     |
| <i>Anomphalus</i> , n. g., M. & W., 1866.....                                      | 268     |
| <i>A. rotulus</i> , n. s., M. & W., 1866.....                                      | 268-269 |
| <i>Microdoma</i> , n. g., M. & W., 1866.....                                       | 269     |
| <i>M. conica</i> , n. s., M. & W., 1866.....                                       | 269-270 |
| <i>Orthonema conica</i> , n. s., M. & W., 1866.....                                | 270     |
| <i>Trochita</i> ? <i>carbonaria</i> , n. s., M. & W., 1866.....                    | 270-271 |
| <i>Platyschisma pelicoides</i> , Sowerby? sp.....                                  | 271     |
| <i>Pleurotomaria conoides</i> , n. s., M. & W., 1866.....                          | 271-272 |
| <i>Pleurotomaria coxana</i> , n. s., M. & W., 1866.....                            | 272     |
| <i>Pleurotomaria spironema</i> , n. s., M. & W., 1866.....                         | 272-273 |
| <i>Pleurotomaria valvatiiformis</i> , n. s., M. & W., 1866.....                    | 273     |
| <i>Murchisonia inornata</i> , n. s., M. & W., 1866.....                            | 274     |

##### Cephalopoda.

|                                                                                         |     |
|-----------------------------------------------------------------------------------------|-----|
| <i>Nautilus</i> ( <i>Trematodiscus</i> ) <i>sulcatus</i> , Sowerby?.....                | 274 |
| <i>Nautilus</i> ( <i>Cryptoceras</i> ) <i>rockfordensis</i> , n. s., M. & W., 1866..... | 275 |

In a note the authors consider their previously proposed *Evactinopora* as equivalent to *Conodictyum* Münster, and call their species *C. radiatum*.

## 43.

MEEK, F. B., and WORTHEN, A. H. Descriptions of Paleozoic fossils from the Silurian, Devonian, and Carboniferous rocks of Illinois and other Western States. <Proc. Chicago Acad. Sci., pp. 11-23. 1866. Chicago, 1866.

Genera Monopteria Megaptera afterward republished in the Illinois Geological Reports, vol. ii.

*Amorphozoa.*

|                                                                | Page. |
|----------------------------------------------------------------|-------|
| <i>Astylospongia ? carbonaria</i> , n. s., M. & W., 1866 ..... | 11-12 |
| <i>Astræospongia hamiltonensis</i> , n. s., M. & W., 1866..... | 12    |

*Mollusca.**Lamellibranchiata.*

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| <i>Placunopsis carbonaria</i> , n. s., M. & W., 1866.....         | 13    |
| <i>Ariculopecten randolphensis</i> , n. s., M. & W., 1866 .....   | 14    |
| <i>A. indianensis</i> , n. s., M. & W., 1866.....                 | 14-15 |
| <i>A. fimbriatus</i> , n. s., M. & W., 1866 .....                 | 15-16 |
| <i>Vanuxemia dixonensis</i> , n. s., M. & W., 1866.....           | 16-17 |
| <i>Macrodon tenuistriatus</i> , n. s. g., M. & W., 1866 .....     | 17    |
| <i>Schizodus curtus</i> , n. s., M. & W., 1866.....               | 18    |
| <i>Anthracopecten ? fragilis</i> , n. s., M. & W., 1866 .....     | 18-19 |
| <i>Myalina meliniiformis</i> , n. s., M. & W., 1866 .....         | 19-20 |
| <i>Monopteria</i> , n. s., g., M. & W., 1866.....                 | 20    |
| <i>Pterinea (Monopteria) gibbosa</i> , n. s., M. & W., 1866 ..... | 20-21 |
| <i>Pterinea ? subpapyracea</i> , n. s., M. & W., 1866.....        | 21-22 |
| <i>Ambonychia (Megaptera) casei</i> , n. s., M. & W., 1866.....   | 22-23 |

## 44.

MEEK, F. B., and WORTHEN, A. H. Descriptions of Invertebrates from the Carboniferous System. <Geological Survey of Illinois, vol. ii, pp. 145-411, plates, 14-20 and 23-32. 1866. Published by authority of the legislature of Illinois, Springfield, 1866.

Genera Sphenopoterium, Cardiopsis, Trematodiscus, Strotocrinus, Steganocrinus, Cælocrinus, Oligoporus, Erisocrinus, Syntrielasma, Eumicrotis, Trachydomia, Orthonema, Soleniscus, Acanthotelson, Palæocaris, Anthracerpes, Palæocampa, Shænaster. Volumes ii, iii, v, and vi of these reports all comprise very important works on Invertebrate Paleontology, in which are not only species and genera described, but higher groups are defined, and many important questions are philosophically discussed.

## INVERTEBRATE FOSSILS OF THE KINDERHOOK GROUP.

*Protozoa.**Spongiæ.*

|                                                                                      | Page.   |
|--------------------------------------------------------------------------------------|---------|
| * <i>Sphenopoterium</i> , M. & W., 1860.....                                         | 145-146 |
| <i>S. enorme</i> , M. & W., 1860, pl. xiv, figs. 1 a, 1 b.....                       | 146     |
| <i>S. enorme</i> var. <i>depressum</i> , M. & W., 1866, pl. xiv, figs. 2 a, 2 b..... | 146     |

*Radiata.**Echinodermata.**Crinoidea.*

|                                                                                        |         |
|----------------------------------------------------------------------------------------|---------|
| <i>Actinocrinus</i> , Miller .....                                                     | 147-149 |
| <i>Batocrinus</i> , Casseday ( <i>Eretmocrinus</i> Lyon?).....                         | 150-151 |
| Subgenus <i>Batocrinus</i> , Casseday .....                                            | 151     |
| Sec. C. ( <i>Uperocrinus</i> , M. & W.).....                                           | 151     |
| <i>Actinocrinus (Batocrinus) pistilliformis</i> , M. & W., 1861, pl. xiv, fig. 8 ..... | 151-153 |

*Mollusca.**Brachiopoda.*

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Rhynchonella</i> , Fischer, 1809 .....                                      | 153     |
| <i>R. missouriensis</i> , Shumard, 1855, pl. xiv, figs. 4 a, 4 b .....         | 153-154 |
| <i>Spirifer</i> , Sowerby, 1815.....                                           | 155     |
| Subgenus <i>Martinia</i> , McCoy, 1841 .....                                   | 155     |
| <i>S. (Martinia) cooperensis</i> , Swallow, 1860, pl. xiv, figs. 5 a, 5 b..... | 155-156 |

\* σφην, a wedge, ποτηριον, a drinking cup.

|                                                                                   | Page    |
|-----------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata.</i>                                                         |         |
| <i>Cardiopsis</i> , M. & W., 1861.....                                            | 156-157 |
| <i>C. radiata</i> , M. & W., 1860, pl. xiv, figs. 6 a, 6 b.....                   | 157-158 |
| <i>Gasteropoda.</i>                                                               |         |
| <i>Straparollus</i> , Montfort, 1810.....                                         | 158-159 |
| <i>S. lens</i> , Hall, sp., 1860, pl. xiv, figs. 7 a, 7 b.....                    | 159-160 |
| <i>Bellerophon</i> , Montfort, 1810.....                                          | 160     |
| <i>B. cyrtolites</i> , Hall, 1860, pl. xiv, figs. 8 a, 8 b.....                   | 160-161 |
| <i>Cephalopoda.</i>                                                               |         |
| <i>Nautilus</i> , Linnaeus, 1758.....                                             | 161     |
| Subgenus <i>Trematodiscus</i> , M. & W., 1861.....                                | 161-162 |
| <i>N. (Trematodiscus) trisulcatus</i> , M. & W., 1860, pl. xiv, figs. 10 a-c..... | 162-163 |
| <i>N. digonus</i> , M. & W., 1860, pl. xiv, figs. 9 a-d.....                      | 163-164 |
| <i>Goniaticites</i> , de Haan, 1825.....                                          | 165     |
| <i>G. lyoni</i> , M. & W., 1860, pl. xiv, figs. 11 a-c.....                       | 165-166 |

## INVERTEBRATE FOSSILS OF THE BURLINGTON GROUP.

*Radiata.**Echinodermata.**Crinoidea.*

|                                                                                                                     |         |
|---------------------------------------------------------------------------------------------------------------------|---------|
| <i>Dichocrinus</i> , Miller, 1821.....                                                                              | 167-169 |
| <i>D. conus</i> , M. & W., 1860, pl. xvi, figs. 5 a, b.....                                                         | 169-170 |
| <i>Platycrinus</i> , Miller, 1821.....                                                                              | 170-172 |
| <i>Centrocrinus</i> , Austin.....                                                                                   | 172     |
| <i>Pleurocrinus</i> , Austin.....                                                                                   | 172     |
| <i>Marsupiocrinites</i> , Phillips.....                                                                             | 172     |
| Subgenus <i>Pleurocrinus</i> , Austin.....                                                                          | 173     |
| <i>Platycrinus (Pleurocrinus) subspinosus</i> , Hall, 1858, pl. xv, fig. 6.....                                     | 173-175 |
| <i>Cyathocrinus</i> , Miller, 1821.....                                                                             | 175-178 |
| <i>C. sculptilis</i> , Hall, 1860, pl. xv, fig. 2 a, b.....                                                         | 178-179 |
| <i>Poteroicrinus</i> , Miller, 1821.....                                                                            | 179-182 |
| <i>P. swallovii</i> , M. & W., 1860, pl. 16, figs. 4 a, b, and fig. 3, p. 184.....                                  | 183-184 |
| <i>Zeacrinus</i> , Troost.....                                                                                      | 185-186 |
| <i>Z. troostanus</i> , M. & W., 1860, pl. xvi, fig. 2 and fig. 4, p. 187.....                                       | 186-187 |
| <i>Strotocrinus</i> , M. & W., [1866].....                                                                          | 188-192 |
| <i>S. perumbrosus?</i> , Hall, fig. 5, p. 188.....                                                                  | 188     |
| <i>S. regalis</i> , sp., Hall, 1860, pl. xvi, figs. 6 a, b, fig. 6, p. 191, fig. 7, p. 192, and fig. 8, p. 194..... | 191-195 |
| <i>Steganocrinus</i> , n. g., M. & W. [1866].....                                                                   | 195     |
| <i>S. pentagonus</i> ,† Hall, figs. 9 a, d.....                                                                     | 196     |
| <i>S. sculptus</i> , Hall, figs. 10, a, b, and d, p. 197.....                                                       | 197-198 |
| <i>S. araneolus</i> , M. & W., 1860, pl. xv, figs. 1 a, b.....                                                      | 198-200 |
| <i>Actinocrinus</i> , Miller, 1821.....                                                                             | 200     |
| <i>A. concinnus</i> , Shumard, 1855, pl. xv, figs. 9 a, b., fig. 11, p. 202.....                                    | 200-202 |
| <i>A. scitulus</i> , M. & W., 1860, pl. xv, figs. 7 a, b, and fig. 12, p. 204.....                                  | 202-205 |
| <i>A. sillimani</i> , M. & W., 1860, fig. 13, p. 204.....                                                           | 204-205 |
| Subgenus <i>Batocrinus</i> , Casseday.....                                                                          | 205     |
| <i>A. (Batocrinus) dodecadactylus</i> , M. & W., 1861, pl. xv, figs. 3 a-c., fig. 14, p. 206.....                   | 205-207 |
| <i>A. Batocrinus asteriscus</i> , M. & W., 1860, pl. xv, figs. 8 a-c.....                                           | 207-209 |
| <i>Amphocrinus</i> , Austin, 1848.....                                                                              | 209-211 |
| <i>A. subtrabinatus</i> , M. & W., 1860, pl. xv, figs. 4 a, b., and fig. 15, p. 213.....                            | 212-213 |
| <i>Coelocrinus</i> ,† M. & W., 1865.....                                                                            | 214-215 |
| <i>O. concavus</i> , M. & W., 1861, pl. xv, figs. 10 a-c., and fig. 16, p. 215.....                                 | 215-216 |
| <i>Gilbertocrinus</i> , Phillips= <i>Ollacrinus</i> , Cumberland.....                                               | 217-219 |
| Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday= <i>Trematocrinus</i> , Hall.....                             | 219     |
| <i>Gilbertocrinus bursa</i> , Phillips, fig. 17, p. 217.....                                                        | 217     |
| <i>G. calcaratus</i> , Phillips, fig. 18 a-c, p. 217.....                                                           | 217     |
| <i>Goniasteroidocrinus tuberosus</i> , Lyon & Casseday, fig. 19 a-d, p. 220.....                                    | 220     |
| <i>G. (Goniasteroidocrinus) fiscellus</i> , M. & W., 1860, pl. xv, fig. 5, and fig. 20, p. 224.....                 | 222-225 |

*Echinoidea.**Perischæchinidae.*

|                                                                |         |
|----------------------------------------------------------------|---------|
| <i>Melonites multipora</i> , figs. 21 and 22, pp. 227-228..... | 227-228 |
|----------------------------------------------------------------|---------|

\* στρωτος, spread; χρινον, a lily.

† στεγανος, covered; χρινον, a lily; in allusion to the covered free rays.

‡ χοιλος, hollow; χρινον, a lily.

*Palacchinidae*, McCoy.

*Archaeocidaridae*, McCoy.

*Palacchinus*, McCoy, 1844 ..... 225

*P. burlingtonensis*, M. & W., 1860, pl. xvi, figs. 3 *a-c*, and fig. 23, p. 231..... 230-231

*Mollusca*.

*Lamellibranchiata*.

*Aviculopecten*, McCoy, 1851 ..... 231

*A. burlingtonensis*, M. & W., 1860, pl. xvi, figs. 1 *a, b* ..... 231-232

INVERTEBRATE FOSSILS OF THE KEOKUK GROUP.

*Protozoa*.

*Spongiae*.

*Petrospongia*.

*Sphenopoterium*, M. & W., 1860 ..... 233

*S. obtusum*, M. & W., 1860, pl. xvii, figs. 2 *a-d* (by error *a* on pl.), 2 *e* ..... 233

*S. compressum*, M. & W., 1860, pl. xvii, figs. 1 *a-c* ..... 234

*Radiata*.

*Echinodermata*.

*Crinoidea*.

*Cyathocrinus*, Miller, 1821 ..... 234

*C. angulatus*, M. & W., 1860, pl. xvii, fig. 4 ..... 234-236

*C. safordi*, M. & W., 1860, pl. xvii, figs. 5 *a* and *b*, and fig. 24, p. 237 ..... 236-237

*Potriocrinus*, Miller ..... 237

Subgenus *Scaphiocrinus*, Hall, 1858 ..... 237

*P. (Scaphiocrinus) decadaetylus*, M. & W., 1860, pl. xvii, fig. 6 and fig. 25, p. 240 .... 238-240

*Zenocrinus*, Troost ..... 240

*Z. planobrachiatatus*, M. & W., 1860, pl. xviii, fig. 5 ..... 240-241

*Onychocrinus*, Lyon & Casseday, 1859 ..... 242-244

*O. monroensis*, M. & W., 1861, pl. xvii, fig. 7 ..... 244-245

*O. norwoodi*, M. & W., 1860, pl. xvii, fig. 3, and fig. 26, p. 247 ..... 245-247

*Echinoidea*.

*Perischæchinidae*.

\**Oligoporus*, M. & W., 1860 ..... 247

*Melonites multipora*, fig. 27 ..... 248

*Oligoporus dance*, M. & W., 1860, pl. xvii, fig. 8 and fig. 28, p. 248 ..... 248-251

*Mollusca*.

*Brachiopoda*.

*Camarophoria*, King, 1844.

*C. subtrigonia*, M. & W., 1860, pl. xviii, figs. 8 *a-c* ..... 251-253

*Chonetes*, Fischer, 1837.

*C. planumbona*, M. & W., 1860, pl. xviii, figs. 1 *a-d* ..... 253-254

*Athyris*, McCoy, 1844.

*A. planosulcata*, Phillips? (sp.), 1836, pl. xxii, figs. 8 *a-d* ..... 254-255

*Lamellibranchiata*.

*Aviculopecten*, McCoy, 1851 ..... 256

*A. oweni*, M. & W., 1860, pl. xviii, figs. 2 *a-c* ..... 256

*A. amplius*, M. & W., 1860, pl. xviii, figs. 4 *a-c* ..... 257-258

*A. oblongus*, M. & W., 1860, pl. xviii, figs. 3*a* and *b* ..... 258-259

*Gasteropoda*.

*Pleurotomaria*, DeFrance, 1826 ..... 260

*P. shumardi*, M. & W., 1860, pl. xviii, figs. 6*a* and *b* ..... 260-261

INVERTEBRATE FOSSILS OF THE ST. LOUIS GROUP.

*Protozoa*.

*Spongiae*.

*Petrospongia*.

*Sphenopoterium*, M. & W.

*S. cuneatum*, M. & W., 1860, pl. xix, figs. 1 *a-d* ..... 262-263

*Radiata*.

*Echinodermata*.

*Crinoidea*.

*Dichocrinus*, Munster.

*D. constrictus*, M. & W., 1860, pl. xix, figs. 2 *a-c* ..... 263-264

*Platycrinus*, Miller, 1821 ..... 264

*P. prattenanus*, M. & W., 1860, pl. xx, fig. 2 ..... 264-265

\* *ὀλιγος*, few; *ἵππος*, a passage.



|                                                                                                    | Page.   |
|----------------------------------------------------------------------------------------------------|---------|
| <i>P. penicillus</i> , M. & W., 1860, pl. xix, figs. 6 <i>a-c</i> .....                            | 266-267 |
| <i>P. plenus</i> , M. & W., 1860, pl. xx, fig. 3 .....                                             | 267-268 |
| <i>Taxocrinus</i> , Phillips, 1843 .....                                                           | 268-270 |
| <i>Forbesiocrinus</i> , de Koninck & Le Hon, 1854 .....                                            | 270     |
| <i>Taxocrinus semiovatus</i> , M. & W., 1860, pl. xx, figs. 4 <i>a-b</i> .....                     | 272-274 |
| <i>Blastoidea</i> .                                                                                |         |
| <i>Granatocrinus</i> , Troost, 1850 .....                                                          | 274-275 |
| <i>G. cornutus</i> , sp., M. & W., 1860, pl. xx, fig. 1 .....                                      | 276     |
| <i>Asteroidea</i> .                                                                                |         |
| <i>Schœnaster</i> , M. & W. [1860] .....                                                           | 277-278 |
| <i>S. fimbriatus</i> , M. & W., 1860, pl. xix, figs. 7 <i>a-d</i> .....                            | 278-280 |
| <i>Mollusca</i> .                                                                                  |         |
| <i>Brachiopoda</i> .                                                                               |         |
| <i>Productus</i> , Sowerby, 1814 .....                                                             | 280     |
| <i>P. scitulus</i> , M. & W., 1860, pl. xx, figs. 5 <i>a-d</i> .....                               | 280-281 |
| <i>Lamellibranchiata</i> .                                                                         |         |
| <i>Myalina</i> , de Koninck, 1844 .....                                                            | 281     |
| <i>M. concentrica</i> , M. & W., 1860, pl. xix, figs. 3 <i>a-c</i> .....                           | 281-282 |
| <i>Yoldia</i> , Møller, 1842 .....                                                                 | 282     |
| <i>Y. ? levistriata</i> , M. & W., 1860, pl. xx, figs. 7 <i>a</i> and <i>b</i> .....               | 282-283 |
| <i>Nuculana</i> , Link, 1807 .....                                                                 | 283     |
| <i>N. ? curta</i> , M. & W., 1861, pl. xx, figs. 6 <i>a</i> and <i>b</i> .....                     | 283-284 |
| <i>Gasteropoda</i> .                                                                               |         |
| <i>Dentalium</i> , Linnaeus, 1758 .....                                                            | 284     |
| <i>D. venustum</i> , M. & W., 1861, pl. xix, fig. 8 .....                                          | 284     |
| <i>Straparollus</i> , Montfort, 1810 .....                                                         | 285     |
| <i>S. similis</i> , M. & W., 1861, pl. xix, figs. 4 <i>a-b</i> .....                               | 285-286 |
| <i>S. similis</i> var. <i>planus</i> , M. & W., 1861, pl. xix, fig. 5 <i>a-c</i> .....             | 286     |
| <i>Cephalopoda</i> .                                                                               |         |
| <i>Orthoceras</i> , Auct. ....                                                                     | 286     |
| <i>O. expansum</i> , M. & W., 1860, pl. xx, figs. 8 <i>a-c</i> .....                               | 286-287 |
| INVERTEBRATE FOSSILS OF THE CHESTER GROUP.                                                         |         |
| <i>Radiata</i> .                                                                                   |         |
| <i>Echinodermata</i> .                                                                             |         |
| <i>Orinoidea</i> .                                                                                 |         |
| <i>Pterotoocrinus</i> , Lyon & Casseday, 1859 .....                                                | 288-290 |
| <i>P. crassus</i> , M. & W., 1860, pl. xxiii, figs. 2 <i>a, b</i> , and fig. xxix, p. 292 .....    | 290-292 |
| <i>P. chesterensis</i> , M. & W., 1860, pl. xxiii, figs. 1 <i>a-c</i> , and fig. 30, p. 293 .....  | 292-293 |
| <i>Echinoidea</i> .                                                                                |         |
| <i>Perischœchinidæ</i> .                                                                           |         |
| <i>Archæocidaris</i> , McCoy, 1844 .....                                                           | 294-295 |
| <i>A. mucronata</i> , M. & W., 1860, pl. xxiii, figs. 3 <i>a-c</i> .....                           | 295-296 |
| <i>Mollusca</i> .                                                                                  |         |
| <i>Brachiopoda</i> .                                                                               |         |
| <i>Productus</i> , Sowerby, 1812 .....                                                             | 297     |
| <i>P. parvus</i> , M. & W., 1860, pl. xxiii, figs. 4 <i>a-c</i> .....                              | 297-298 |
| <i>Spirifer</i> , Sowerby, 1815 .....                                                              | 298     |
| Subgenus <i>Martinia</i> , McCoy, 1844 .....                                                       | 298     |
| <i>S. (Martinia) glaber</i> var. <i>contractus</i> , M. & W., pl. xxiii, figs. 5 <i>a, b</i> ..... | 298-299 |
| <i>Lamellibranchiata</i> .                                                                         |         |
| <i>Myalina</i> de Koninck, 1844 .....                                                              | 300     |
| <i>M. angulata</i> , M. & W., 1860, pl. xxiii, figs. 7 <i>a, b</i> .....                           | 300-301 |
| <i>Schizodus</i> , King, 1844 .....                                                                | 301     |
| <i>S. chesterensis</i> , M. & W., 1865, pl. xxiii, figs. 6 <i>a, b</i> .....                       | 301-302 |
| <i>Gasteropoda</i> .                                                                               |         |
| <i>Straparollus</i> , Montfort, 1810 .....                                                         | 302     |
| <i>S. planidorsatus</i> , M. & W., 1860, pl. 24, figs. 2 <i>a-c</i> .....                          | 302-303 |
| <i>Pleurotomaria</i> , DeFrance, 1826 .....                                                        | 303     |
| <i>P. chesterensis</i> , M. & W., 1860, pl. xxiv, figs. 1 <i>a-c</i> .....                         | 303-304 |
| <i>Cephalopoda</i> .                                                                               |         |
| <i>Orthoceras</i> , Auct. ....                                                                     | 304     |
| <i>O. annulato-costatum</i> , M. W., 1861, pl. xxiv, figs. 3 <i>a, b</i> .....                     | 304-305 |

\* σχοινος, a rope; αστηρ, a star.

|                                                                                               | Page.   |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Nautilus</i> , Linnæus, 1758.....                                                          | 305     |
| <i>N. globatus</i> , Sowerby? 1825, pl. xxiv, figs. 5 <i>a</i> , <i>b</i> .....               | 305-306 |
| <i>N. chesterensis</i> , M. & W., 1860, pl. xxiv, figs. 4 <i>a</i> , <i>b</i> .....           | 306-307 |
| Subgenus <i>Endolobus</i> .* M. & W., 1865.....                                               | 307-308 |
| <i>N. (Endolobus) spectabilis</i> , M. & W., 1860, pl. xxv, figs. 1 <i>a</i> , <i>b</i> ..... | 308-309 |

INVERTEBRATE FOSSILS OF THE COAL MEASURES.

*Radiata.*

*Crinoidea.*

|                                                                                                            |         |
|------------------------------------------------------------------------------------------------------------|---------|
| <i>Cyathocrinus</i> , Miller, 1821.....                                                                    | 310     |
| <i>C.? sangamonensis</i> , M. & W., 1861, pl. xxvi, figs. 1 <i>a</i> , <i>b</i> , and fig. 31, p. 311..... | 310-312 |
| <i>Zeacrinus</i> , Troost.....                                                                             | 312     |
| <i>Z. discus</i> , M. & W., 1860, pl. xxvi, figs. 3 <i>a</i> , <i>b</i> .....                              | 312-313 |
| <i>Z.? crassus</i> , M. & W., 1860, pl. xxvi, figs. 2 <i>a</i> , <i>b</i> , and fig. 32, p. 315.....       | 314-315 |
| <i>Erisocrinus</i> , M. & W., 1865.....                                                                    | 315-317 |
| <i>E. typus</i> , M. & W., 1865, fig. 33, p. 317, and fig. 34 <i>a-c</i> , p. 318.....                     | 317-318 |
| <i>E. conoideus</i> , M. & W., 1865, figs. 35 <i>a</i> , <i>b</i> .....                                    | 318-319 |
| <i>E. tuberculatus</i> , M. & W., 1865.....                                                                | 319-320 |

*Mollusca.*

*Brachiopoda.*

|                                                                                                                        |         |
|------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Productus</i> , Sowerby, 1812.....                                                                                  | 320     |
| <i>P. nanus</i> , M. & W., 1860, pl. xxvi, figs. 4 <i>a-d</i> .....                                                    | 320-321 |
| <i>Syntriclasma</i> , M. & W., 1865.....                                                                               | 321-323 |
| <i>S. hemiplicata</i> , Hall, (sp.), 1862, figs. 36 <i>a-c</i> , p. 322, and fig. 37 <i>a</i> , <i>b</i> , p. 324..... | 322-325 |

*Lamellibranchiata.*

|                                                                                                                |         |
|----------------------------------------------------------------------------------------------------------------|---------|
| <i>Aviculopecten</i> , McCoy, 1852.....                                                                        | 326     |
| <i>A. coxanus</i> , M. & W., 1860, pl. xxvi, fig. 6 <i>a</i> , <i>b</i> .....                                  | 326-327 |
| <i>A. pellucidus</i> , M. & W., 1860, pl. xxvi, fig. 5 <i>a</i> , <i>b</i> .....                               | 327-328 |
| <i>A. koninckii</i> , M. & W., 1860, pl. xxvi, fig. 8.....                                                     | 328-329 |
| <i>A. interlineatus</i> , M. & W., 1860, pl. xxvi, fig. 7 <i>a</i> , <i>b</i> .....                            | 329-330 |
| <i>A. occidentalis</i> , Shumard? 1855 pl. xxvii, figs. 4, 5, 5 <i>a</i> .....                                 | 331-332 |
| <i>Streblopteria</i> , McCoy, 1851.....                                                                        | 332-334 |
| <i>S.? tenuilineata</i> , M. & W., 1860, pl. xxvi, figs. 9 <i>a</i> , <i>b</i> .....                           | 334-336 |
| <i>Eumicrotis</i> , Meek, 1864.....                                                                            | 336-337 |
| <i>E. hawni</i> var. <i>sinuata</i> , M. & W. [1866], pl. xxvii, figs. 12 <i>a</i> , 12 <i>b</i> , 13, 14..... | 338-339 |
| <i>Pterinea</i> , Goldfuss, 1833.....                                                                          | 339     |
| Subgenus <i>Monopteria</i> ,† M. & W., 1866.....                                                               | 339-340 |
| <i>P. (Monopteria) gibbosa</i> , M. & W., 1866, pl. xxvii, figs. 11, 11 <i>a</i> , <i>b</i> .....              | 340-341 |
| <i>Myalina</i> , de Koninck, 1844.....                                                                         | 341     |
| <i>M. swallowi</i> , McChesney, 1860, pl. xxvii, figs. 1 <i>a-d</i> .....                                      | 341-342 |
| <i>M. meliniformis</i> , M. & W., 1866, pl. xxvii, fig. 3.....                                                 | 343-344 |
| <i>M. recurvirostris</i> , M. & W., 1860, pl. xxvi, figs. 9 <i>a-c</i> .....                                   | 344-345 |
| <i>Schizodus</i> , King, 1844.....                                                                             | 345     |
| <i>Schizodus</i> , ———, sp.?, pl. xxvii, fig. 7.....                                                           | 345-346 |
| <i>Edmondia</i> , de Koninck, 1844.....                                                                        | 346     |
| <i>E. unioniformis</i> , sp., Phillips, 1836, pl. xxvii, figs. 6, 6 <i>a</i> and <i>b</i> .....                | 346-347 |
| <i>Pleurophorus</i> , King, 1844.....                                                                          | 347     |
| <i>P. subcostatus</i> , M. & W., 1865, pl. xxvii, figs. 2, 2 <i>a</i> .....                                    | 347-349 |
| <i>Solenomya</i> , Lamarck, 1819.....                                                                          | 349     |
| <i>S. radiata</i> , M. & W., 1860, pl. xxvi, fig. 10 <i>a</i> , <i>b</i> .....                                 | 349-350 |
| <i>Allorisma</i> , King, 1844.....                                                                             | 350     |
| <i>Allorisma</i> , sp. undt., pl. xxvii, figs. 9, 9 <i>a</i> .....                                             | 350     |

*Gasteropoda.*

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Pleurotomaria</i> , DeFrance, 1836.....                                     | 351     |
| <i>P. subconstricta</i> , M. & W., 1860, pl. xxviii, figs. 6 <i>a-c</i> .....  | 351-352 |
| <i>P. speciosa</i> , M. & W., 1860, pl. xxviii, figs. 5 <i>a-c</i> .....       | 352-353 |
| <i>P. scitula</i> , M. & W., 1860, pl. xxviii, figs. 9 <i>a-d</i> .....        | 353-354 |
| <i>P. brazoensis</i> , Shumard? 1860, pl. xxviii, figs. 1 <i>a-d</i> .....     | 354-355 |
| <i>P. tenuicincta</i> , M. & W., 1860, pl. xxviii, fig. 3 <i>a-d</i> .....     | 355-356 |
| <i>P. granulo-striata</i> , M. & W., 1860, pl. xxviii, fig. 2 <i>a-d</i> ..... | 356-357 |
| <i>P. pratteni</i> , M. & W., 1860, pl. xxviii, fig. 7 <i>a-d</i> .....        | 357-358 |
| <i>P. subsinuata</i> , M. & W., 1860, pl. xxvii, figs. 4 <i>a-d</i> .....      | 358-359 |
| <i>P. turbiniformis</i> , M. & W., 1860, pl. xxviii, figs. 8 <i>a-c</i> .....  | 359-360 |

\* ενδον, within; λοφος, a lobe.

† μονος, solitary; πτερον, a wing.

|                                                                                                                                  | Page.   |
|----------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>P. subscalaris</i> , M. & W., 1860, pl. xxviii, figs. 10 <i>a</i> , <i>b</i> (by error on pl., 9 <i>a</i> , 9 <i>b</i> )..... | 360-361 |
| <i>P. ? tumida</i> , M. & W., 1860, pl. xxxi, figs. 1 <i>a</i> , <i>b</i> .....                                                  | 361-362 |
| <i>Straparollus</i> , Montfort, 1819.....                                                                                        | 362     |
| <i>S. umbilicatus</i> , M. & W., 1860, pl. xxix, figs. 1 <i>a-c</i> .....                                                        | 362-363 |
| <i>Naticopsis</i> , McCoy, 1844.....                                                                                             | 363-365 |
| <i>Naticopsis nana</i> , M. & W., 1860, pl. xxxi, figs. 4 <i>a</i> , <i>b</i> .....                                              | 365-366 |
| Subgenus <i>Trachydomia</i> ,* M. & W., 1866.....                                                                                | 364     |
| <i>N. (Trachydomia) nodosa</i> , M. & W., 1860, pl. xxxi, figs. 2 <i>a</i> , <i>b</i> .....                                      | 366-367 |
| <i>N. (Trachydomia) nodosa</i> , var. <i>hollidayi</i> , M. & W., 1860, pl. xxxi, figs. 3 <i>a</i> , <i>b</i> .....              | 367     |
| <i>Macrocheilus</i> , Phillips, 1841.....                                                                                        | 367-369 |
| <i>M. medialis</i> , M. & W., 1865, pl. xxxi, figs. 5 <i>a</i> , <i>b</i> .....                                                  | 370     |
| <i>M. intercalaris</i> , M. & W., 1860, pl. xxxi, figs. 6 <i>a</i> , <i>b</i> .....                                              | 371     |
| <i>Macrocheilus</i> , sp. undt., pl. xxvii, fig. 10.....                                                                         | 372     |
| <i>Polyphemopsis</i> , Portlock, 1843.....                                                                                       | 372-373 |
| <i>P. inornata</i> , H. & W., 1860, pl. xxxi, figs. 8 <i>a-c</i> .....                                                           | 374     |
| <i>P. nitidula</i> , M. & W., 1860, pl. xxxi, figs. 9 <i>a</i> , <i>b</i> .....                                                  | 374-375 |
| <i>P. peracuta</i> , M. & W., 1860, pl. xxxi, figs. 7 <i>a</i> , <i>b</i> .....                                                  | 375-376 |
| <i>Loxonema</i> , Phillips, 1841.....                                                                                            | 377     |
| <i>L. scitula</i> , M. & W., 1860, pl. xxxi, figs. 10 <i>a-c</i> .....                                                           | 377     |
| <i>L. rugosa</i> , M. & W., 1860, pl. xxxi, figs. 11 <i>a-c</i> .....                                                            | 378     |
| <i>L. multicostata</i> , n. s., M. & W., 1866, pl. xxxi, figs. 12 <i>a-c</i> .....                                               | 378-379 |
| <i>L. cerithiformis</i> , M. & W., 1860, pl. xxxi, figs. 13 <i>a-c</i> .....                                                     | 379-380 |
| † <i>Orthonema</i> , M. & W., 1861.....                                                                                          | 380-381 |
| <i>O. salteri</i> , M. & W., 1860, pl. xxxi, figs. 14 <i>a-c</i> .....                                                           | 381     |
| <i>Turritella</i> , Lamarck, 1799.....                                                                                           | 382     |
| <i>T. ? ? stevensana</i> , n. s., M. & W., 1866, pl. xxvii, figs. 8 and 8 <i>a</i> .....                                         | 382-383 |
| § <i>Soleniscus</i> , M. & W., 1860.....                                                                                         | 383-384 |
| <i>S. typicus</i> , M. & W., 1860, pl. xxxi, figs. 15 <i>a</i> and <i>b</i> .....                                                | 384     |
| <i>Bellerophon</i> , Montfort, 1808.....                                                                                         | 385     |
| <i>B. crassus</i> , M. & W., 1860, pl. xxxi, figs. 16 <i>a</i> and <i>b</i> .....                                                | 385     |
| <b>Cephalopoda.</b>                                                                                                              |         |
| <i>Nautilus</i> , Linnæus, 1758.....                                                                                             | 386     |
| <i>N. planorbiformis</i> , M. & W., 1860, pl. xxix, figs. 4 <i>a-c</i> .....                                                     | 386     |
| <i>N. sangamonensis</i> , M. & W., 1860, pl. xxix, figs. 3, 3 <i>a</i> , <i>b</i> .....                                          | 386-388 |
| <i>Cyrtoceras</i> , Goldfuss, 1832.....                                                                                          | 388     |
| <i>C. (Aploceras) curtum</i> , M. & W., 1860, pl. xxx, figs. 1 <i>a-c</i> .....                                                  | 388-389 |
| <i>C. ? dilatatum</i> , M. & W., 1860, pl. xxix, fig. 2.....                                                                     | 389     |
| <i>Goniatites</i> , de Haan, 1825.....                                                                                           | 390     |
| <i>G. globulosus</i> , M. & W., 1860, pl. xxx, figs. 2 <i>a-c</i> , and fig. 38, p. 390, and fig. 39, p. 391.....                | 390-392 |
| <i>G. iowensis</i> , M. & W., 1860, pl. xxx, fig. 3 <i>a-c</i> .....                                                             | 392-393 |
| <b>Articulata.</b>                                                                                                               |         |
| <b>Crustacea.</b>                                                                                                                |         |
| <b>Entomostraca.</b>                                                                                                             |         |
| <b>Xiphosura.</b>                                                                                                                |         |
| <i>Bellinurus</i> , König.....                                                                                                   | 393-395 |
| <i>B. danæ</i> , M. & W., 1865, pl. xxxii, figs. 2, 2 <i>a</i> .....                                                             | 395-398 |
| <b>Tetradecapoda.</b>                                                                                                            |         |
| <b>Isopoda.</b>                                                                                                                  |         |
| <b>(Anisopoda.)</b>                                                                                                              |         |
| <i>Acanthotelson</i> , M. & W., 1860.....                                                                                        | 399-401 |
| <i>A. stimpsoni</i> , M. & W., 1865, pl. xxxii, figs. 6, 6 <i>a-f</i> .....                                                      | 401-402 |
| <i>A. inaequalis</i> , M. & W., 1865, pl. xxxii, figs. 7, 7 <i>a</i> .....                                                       | 403     |
| ‡ <i>Palæocaris</i> , M. & W., 1865.....                                                                                         | 403-404 |
| <i>P. typus</i> , M. & W., 1865, pl. xxxii, figs. 5, 5 <i>a-d</i> .....                                                          | 405-406 |
| <b>Decapoda.</b>                                                                                                                 |         |
| <b>Macrura.</b>                                                                                                                  |         |
| <i>Anthrapalæmon</i> , Salter, 1861.....                                                                                         | 406     |
| <i>A. gracilis</i> , M. & W., 1865, pl. xxxii, figs. 4, 4 <i>a-c</i> .....                                                       | 407-408 |
| <b>Myriapoda.</b>                                                                                                                |         |
| ? <i>Anthracerpes</i> , M. & W. [1855].....                                                                                      | 409     |
| <i>A. typus</i> , M. & W., 1865, pl. xxix, figs. 1, 1 <i>a</i> .....                                                             | 409-410 |

\* *πραχος*, rough; *δωμα*, a house.‡ *παλαιος*, ancient; *χαρις*, a shrimp.† *ορθος*, straight; *νημα*, a thread.§ *σωληνισχος*, a little channel or gutter.|| *ανθραξ*, coal; *ερωω*, to creep.



*Insecta.*

*Lepidoptera.*

|                                                           |         |
|-----------------------------------------------------------|---------|
| <i>Palaeocampa</i> , M. & W. [1865].....                  | 401     |
| <i>P. anthrax</i> , M. & W., 1865, pl. xxxii, fig. 3..... | 410-411 |

45.

MEEK, F. B. Check-lists of the Invertebrate fossils of North America. Cretaceous and Jurassic. < Smithsonian Miscellaneous Collections (No. 177), pp. 1-40. 1864. Washington, 1867.

Contains, besides list, "Notes and explanations" of generic and specific characters of much importance.

The following species are discussed in the notes and explanations:

CRETACEOUS.

Page.

|                                                                                                      |    |
|------------------------------------------------------------------------------------------------------|----|
| <i>Planularia cuneata</i> , Mort. = <i>Phonemus (Flabellina) cuneatus</i> , (Mort.) Meek.....        | 31 |
| <i>Palmlula sagittaria</i> , Lea = <i>Phonemus (Flabellina) sagittarius</i> , (Lea) Meek.....        | 31 |
| <i>Orbitulites texanus</i> , Rømer = <i>Tinoporus (Orbitolina) texanus</i> , (Rømer) Meek.....       | 31 |
| <i>Grammostomum phyllodes</i> , Ehrenburg = <i>Textularia phyllodes</i> , (Ehrenburg) Meek.....      | 31 |
| <i>Plagiostoma echinatum</i> , Mort. = <i>Spondylus echinatus</i> , (Mort.) Meek.....                | 31 |
| <i>Ctenoides acutilineata</i> , Con. = <i>Lima acutilineata</i> , (Con.) Meek.....                   | 31 |
| <i>Ctenoides denticulata</i> , Gabb. = <i>Lima denticulata</i> , (Gabb.) Meek.....                   | 31 |
| <i>Plagiostoma pelagicum</i> , Mort. = <i>Lima pelagica</i> , (Mort.) Meek.....                      | 31 |
| <i>Ctenoides squarrosa</i> , Gabb. = <i>Lima squarrosa</i> , (Gabb.) Meek.....                       | 31 |
| <i>Synecyclonema</i> , Meek.....                                                                     | 31 |
| <i>Pecten rigida</i> , H. & M. = <i>Synecyclonema ? rigida</i> , (H. & M.) Meek.....                 | 31 |
| <i>Leda bisulcata</i> , M. & H. = <i>Nuculana bisulcata</i> , (M. & H.) Meek.....                    | 31 |
| <i>Leda longifrons</i> , Con. = <i>Nuculana longifrons</i> , (Con.) Meek.....                        | 32 |
| <i>Leda pinnæformis</i> , Gabb. = <i>Nuculana pinnæformis</i> , (Gabb.) Meek.....                    | 32 |
| <i>Leda protexta</i> , Gabb. = <i>Nuculana protexta</i> , (Gabb.) Meek.....                          | 32 |
| <i>Leda slackiana</i> , Gabb. = <i>Nuculana slackiana</i> , (Gabb.) Meek.....                        | 32 |
| <i>Leda subangulata</i> , Gabb. = <i>Nuculana subangulata</i> , (Gabb.) Meek.....                    | 32 |
| <i>Avicula abrupta</i> , Con. = <i>Pteria abrupta</i> , (Con.) Meek.....                             | 32 |
| <i>Avicula convexo-plano</i> , Rømer = <i>Pteria convexo-plano</i> , (Rømer) Meek.....               | 32 |
| <i>Avicula cretacea</i> , Con. = <i>Pteria cretacea</i> , (Con.) Meek.....                           | 32 |
| <i>Avicula haydeni</i> , H. & M. = <i>Pteria haydeni</i> (H. & M.) Meek.....                         | 32 |
| <i>Avicula iridescens</i> , Shumard = <i>Pteria iridescens</i> , (Shum.) Meek.....                   | 32 |
| <i>Avicula laripes</i> , Mort. = <i>Pteria laripes</i> , (Morton) Meek.....                          | 32 |
| <i>Avicula linguiformis</i> , E. & S. = <i>Pteria linguiformis</i> , (E. & S.) Meek.....             | 32 |
| <i>Avicula nebrascana</i> , E. & S. = <i>Pteria nebrascana</i> , (E. & S.) Meek.....                 | 32 |
| <i>Avicula pedernalis</i> , Rømer = <i>Pteria pedernalis</i> , (Rømer) Meek.....                     | 32 |
| <i>Avicula petrosa</i> , Conrad = <i>Pteria petrosa</i> , (Con.) Meek.....                           | 32 |
| <i>Avicula planisulca</i> , Rømer = <i>Pteria planisulca</i> , (Rømer) Meek.....                     | 32 |
| <i>Avicula subgibbosa</i> , M. & H. = <i>Pteria subgibbosa</i> , (M. & H.) Meek.....                 | 32 |
| <i>Avicula triangularis</i> , E. & S. = <i>Pteria triangularis</i> , (E. & S.) Meek.....             | 32 |
| <i>Actinoceramus</i> , Meek.....                                                                     | 32 |
| <i>Inoceramus sulcatus</i> , Parkinson = <i>Inoceramus (Actinoceramus) costellatus</i> , Con.....    | 32 |
| <i>Volcella attenuata</i> , M. & H. = <i>Modiola attenuata</i> , M. & H.....                         | 32 |
| <i>Volcella concentrico-costellata</i> , Rømer = <i>Modiola concentrico-costellata</i> , Rømer.....  | 32 |
| <i>Volcella cretacea</i> , Con. = <i>Modiola cretacea</i> , Conrad.....                              | 32 |
| <i>Volcella julia</i> , Lea = <i>Modiola julia</i> , Lea.....                                        | 32 |
| <i>Volcella meekii</i> , Evans & Shumard = <i>Modiola meekii</i> , E. & S.....                       | 32 |
| <i>Volcella pedernalis</i> , Rømer = <i>Modiola pedernalis</i> , Rømer.....                          | 32 |
| <i>Volcella saffordi</i> , Gabb. = <i>Modiola saffordi</i> , Gabb.....                               | 32 |
| <i>Modiola granulato-cancellata</i> , Rømer = <i>Crenella granulato-cancellata</i> , (Rømer) Meek .. | 32 |
| <i>Liopistha</i> , Meek.....                                                                         | 32 |
| <i>Cardium elegantulum</i> , Rømer = <i>Papyridea (Liopistha) elegantula</i> , (Rømer) Con.....      | 32 |
| <i>Corbula</i> sp. ind., Owen = <i>Papyridea (Liopistha) rostrata</i> , Meek.....                    | 33 |
| <i>Cardium ? sancti-sabæ</i> , Rømer = <i>Papyridea ? sancti-sabæ</i> , (Rømer), Meek.....           | 33 |
| <i>Cyprina arenaria</i> , M. & H. = <i>Cyrena arenaria</i> , (M. & H.) Meek.....                     | 33 |
| <i>Cyprina humilis</i> , M. & H. = <i>Venilia humilis</i> , (M. & H.) Meek.....                      | 33 |
| <i>Venilia quadrata</i> , Gabb. = <i>Venilia gabbana</i> Meek.....                                   | 33 |

\* παλαιος, ancient; χαμπη, a caterpillar.



|                                                                                                                             | Page. |
|-----------------------------------------------------------------------------------------------------------------------------|-------|
| <i>Cyprina subtumida</i> , M. & H. = <i>Venilia subtumida</i> , (M. & H.) Meek.....                                         | 33    |
| <i>Cyprina laphami</i> , Shumard = <i>Venilia laphami</i> , (Shum.) Meek .....                                              | 33    |
| <i>Venus ? circularis</i> , M. & H. = <i>Cyclina ? circularis</i> , (M. & H.) Meek.....                                     | 33    |
| <i>Callista eufalensis</i> , Con. = <i>Dione eufalensis</i> , (Con.) Meek.....                                              | 33    |
| <i>Cytherea deweyi</i> , M. & H. = <i>Dione Deweyi</i> , (M. & H.) Meek.....                                                | 33    |
| <i>Cytherea leonensis</i> , Con. = <i>Dione leonensis</i> , (Con.) Meek.....                                                | 33    |
| <i>Cytherea lamarensis</i> , Shum. = <i>Dione lamarensis</i> , (Shumard) Meek.....                                          | 33    |
| <i>Cytherea missouriana</i> , Mort. = <i>Dione missouriana</i> , (Morton) Meek.....                                         | 33    |
| <i>Cytherea nebrascensis</i> , M. & H. = <i>Dione nebrascensis</i> , M. & H.....                                            | 33    |
| <i>Cytherea orbiculata</i> , H. & M. = <i>Dione orbiculata</i> , (H. & M.) Meek.....                                        | 33    |
| <i>Cytherea owenana</i> , M. & H. = <i>Dione owenana</i> , (Meek & Hayden) Meek.....                                        | 33    |
| <i>Cytherea pellucida</i> , M. & H. = <i>Dione ? pellucida</i> , (M. & H.) Meek.....                                        | 33    |
| <i>Cytherea texana</i> , Conrad = <i>Dione texana</i> , (Con.) Meek.....                                                    | 33    |
| <i>Cytherea tippiana</i> , Conrad = <i>Dione tippiana</i> , (Con.) Meek.....                                                | 33    |
| <i>Venus meekiana</i> , Gabb. = <i>Dione</i> [?] <i>meekiana</i> , (Gabb) Meek.....                                         | 33    |
| <i>Venus riplejana</i> , Gabb. = <i>Dione</i> [?] <i>riplejana</i> , (Gabb) Meek.....                                       | 33    |
| <i>Cytherea tenuis</i> , H. & M. = <i>Dione</i> [?] <i>tenuis</i> , (H. & M.) Meek.....                                     | 34    |
| <i>Tellina formosa</i> , M. & H. = <i>Abra ? formosa</i> , (M. & H.) Meek.....                                              | 34    |
| <i>Solen irradians</i> , Römer = <i>Linearia irradians</i> , (Römer) Meek.....                                              | 34    |
| <i>Psammodia cancellato-sculpta</i> , Römer = <i>Linearia cancellato-sculpta</i> , (Römer), Meek ..                         | 34    |
| <i>Cymella</i> , Meek.....                                                                                                  | 34    |
| <i>Pholadomya undata</i> , M. & H. = <i>Pholadomya (Cymella) undata</i> , (M. & H.).....                                    | 34    |
| <i>Leda fibrosa</i> , Evans & Shumard = <i>Neæra fibrosa</i> , (E. & S.) Meek.....                                          | 34    |
| <i>Gonioclasma</i> , Meek.....                                                                                              | 34    |
| <i>Xylophaga stimpsoni</i> , M. & H. = <i>Gonioclasma stimpsoni</i> , (M. & H.) Meek.....                                   | 34    |
| <i>Xylophagella</i> , Meek.....                                                                                             | 34    |
| <i>Xylophaga elegantula</i> , M. & H. = <i>Xylophagella elegantula</i> , (M. & H.) Meek.....                                | 34    |
| <i>Ringicula pulchella</i> , Shumard = <i>Cinulia (Avellana) pulchella</i> , (Shum.) Meek.....                              | 34    |
| <i>Actæonina naticoides</i> , Gabb. = <i>Cinulia naticoides</i> , (Gabb) Meek.....                                          | 35    |
| <i>Ringicula subpellucida</i> , Shumard = <i>Ringinella subpellucida</i> , (Shum.) Meek.....                                | 35    |
| <i>Ringicula acutispira</i> , Shumard = <i>Riginella acutispira</i> , (Shum.) Meek.....                                     | 35    |
| <i>Actæonina buplicata</i> , Gabb. = <i>Solidula buplicata</i> , (Gabb) Meek.....                                           | 35    |
| <i>Scalpellum inequicostatum</i> , Shumard = <i>Anisomyon ? inequicostatus</i> , (Shum.).....                               | 35    |
| <i>Capulas occidentalis</i> , H. & M. = <i>Tectura ? occidentalis</i> , (H. & M.) Meek.....                                 | 35    |
| <i>Phasianella haleana</i> , d'Orbigny = <i>Eutropia haleana</i> , (d'Orb.) Meek.....                                       | 35    |
| <i>Phasianella perovata</i> , Shumard = <i>Eutropia perovata</i> , Shumard.....                                             | 35    |
| <i>Phasianella punctata</i> , Gabb. = [ <i>Eutropia</i> ] <i>punctata</i> , Gabb.....                                       | 35    |
| <i>Architectonica abotti</i> , Gabb. = <i>Margaritella abotti</i> , (Gabb) Meek.....                                        | 35    |
| <i>Solarium abyssinus</i> , Gabb. = <i>Margarita abyssinus</i> , (Gabb) Meek.....                                           | 35    |
| <i>Nerita (Neris) densata</i> , Conrad = <i>Neritella (Nereis) densata</i> , (Con.) Meek.....                               | 35    |
| <i>Natica ambigua</i> , M. & H. = <i>Vanikoro ambigua</i> , (M. & H.) Meek.....                                             | 35    |
| <i>Natica tuomeyana</i> , M. & H. = <i>Neritopsis ? tuomeyana</i> , (M. & H.) Meek.....                                     | 35    |
| <i>Spironema</i> , Meek.....                                                                                                | 35    |
| <i>Turbo tenuilineata</i> , M. & H. = <i>Spironema tenuilineata</i> , (M. & H.) Meek.....                                   | 35    |
| <i>Tuba ? bella</i> , Conrad = <i>Spironema bella</i> , (Con.) Meek.....                                                    | 35    |
| <i>Rostellaria biangulata</i> , M. & H. = <i>Anchura ? biangulata</i> , (M. & H.) Meek.....                                 | 35    |
| <i>Aporrhais parva</i> , M. & H. = <i>Anchura ? parva</i> , (M. & H.) Meek.....                                             | 35    |
| <i>Aporrhais sublævis</i> , M. & H. = <i>Anchura ? sublævis</i> , (M. & H.) Meek.....                                       | 35    |
| <i>Drepanocheilus</i> , Meek.....                                                                                           | 35    |
| <i>Rostellaria americana</i> , Evans & Shum. = <i>Anchura (Drepanoch[e]ilus) americana</i> ,<br>(Evans & Shumard) Meek..... | 35-36 |
| <i>Aporrhais decemlirata</i> , Conrad = <i>Anchura (Drepanoch[e]ilus) decemlirata</i> , (Con.) Meek.....                    | 36    |
| <i>Rostellaria nebrascensis</i> , Evans & Shumard = <i>Anchura (Drepanoch[e]ilus) nebrascensis</i> ,<br>(E. & S.) Meek..... | 36    |
| <i>Rostellaria rostrata</i> , Gabb. = <i>Anchura (Drepanoch[e]ilus) rostrata</i> , (Gabb) Meek.....                         | 36    |
| <i>Isopleura</i> , Meek.....                                                                                                | 36    |
| <i>Rimella curvilirata</i> , Conrad = <i>Isopleurus curviliratus</i> , (Con.) Meek.....                                     | 36    |
| <i>Chemnitzia meekiana</i> , Gabb. = <i>Isopleurus meekianus</i> , (Gabb) Meek.....                                         | 36    |
| <i>Pterocerella</i> , Meek.....                                                                                             | 36    |
| <i>Harpago tippiana</i> = <i>Pterocerella tippiana</i> , (Con.) Meek.....                                                   | 36    |
| <i>Chemnitzia</i> , Conrad, 1860 (not d'Orb) = <i>Chemnitzia corona</i> (Con.), Meek.....                                   | 36    |
| <i>Scalaria texana</i> , Römer = <i>Chemnitzia ? texana</i> , (Römer) Meek.....                                             | 36    |
| <i>Scalaria forshayii</i> , Shumard = <i>Scala forshayii</i> , (Shumard) Meek.....                                          | 36    |
| <i>Natica acutispira</i> , Shumard = <i>Lunatia ? acutispira</i> , (Shumard) Meek.....                                      | 36    |
| <i>Volutilithes bella</i> , Gabb. = <i>Rostellites bellus</i> , (Gabb) Meek.....                                            | 36    |

|                                                                                                             | Page. |
|-------------------------------------------------------------------------------------------------------------|-------|
| <i>Volutilithes biphcata</i> , Gabb.= <i>Rostellites biphcatus</i> , (Gabb) Meek .....                      | 36    |
| <i>Volutilithes conradi</i> , Gabb.= <i>Rostellites conradi</i> , (Gabb) Meek .....                         | 36    |
| <i>Volutilithes nasuta</i> , Gabb.= <i>Rostellites nasutus</i> , (Gabb), Meek .....                         | 36    |
| <i>Trachytriton</i> , Meek .....                                                                            | 37    |
| <i>Fusus? vinculum</i> , H. & M.= <i>Trachytriton vinculum</i> , (H. & M.) Meek .....                       | 37    |
| <i>Pleurotomaria texana</i> , Shumard= <i>Turris texanus</i> , (Shumard) Meek .....                         | 37    |
| <i>Piestochilus</i> , Meek, n. g. 1864 .....                                                                | 37    |
| <i>Fusus scarboroughi</i> , M. & H.= <i>Clavellithes (Piestochilus) scarboroughi</i> , (M. & H.) Meek ..... | 37    |
| <i>Fusus vaughani</i> , M. & H.= <i>Cantharus? vaughani</i> , (M. & H.) Meek .....                          | 37    |
| <i>Fusus? flexicostatus</i> , M. & H.= <i>Pyrifusus? flexicostatus</i> , (M. & H.) Meek .....               | 37    |
| <i>Fusus haleanus</i> , d'Orbigny= <i>Pyrifusus? haleanus</i> , (d'Orb.) Meek .....                         | 37    |
| <i>Neptunea impressa</i> , Gabb.= <i>Pyrifusus? impressus</i> , (Gabb) Meek .....                           | 37    |
| <i>Fusus intertextus</i> , M. & H.= <i>Pyrifusus intertextus</i> , (M. & H.) Meek .....                     | 37    |
| <i>Fusus newberryi</i> , M. & H.= <i>Pyrifusus newberryi</i> , (M. & H.) Meek .....                         | 37-38 |
| <i>Fusus subturnitus</i> , M. & H.= <i>Pyrifusus subturnitus</i> , (M. & H.) Meek .....                     | 38    |
| <i>Fusus? tenuilineatus</i> , H. & M.= <i>Tritonifusus? tenuilineatus</i> , (H. & M.) Meek .....            | 38    |
| <i>Pleurotomaria mullicaensis</i> , Gabb= <i>Fusus mullicaensis</i> , Gabb .....                            | 38    |
| <i>Pyrula bairdi</i> , M. & H.= <i>Tudicla (Pyropsis) bairdi</i> , (M. & H.) Meek .....                     | 38    |
| <i>Fusus? dakotensis</i> , M. & H.= <i>Tudicla? dakotensis</i> , (M. & H.) Meek .....                       | 38    |
| <i>Hamites leai</i> , Troost= <i>Ptychoceras leai</i> , (Troost) Meek .....                                 | 38    |
| <i>Hamites verneuili</i> , Troost= <i>Ptychoceras verneuili</i> , (Troost) Meek .....                       | 38    |
| <i>Turritiles</i> sp. undt.= <i>Heteroceras oweni</i> , Meek .....                                          | 38    |
| <i>Helicoceras tortum</i> , M. & H.= <i>Heteroceras tortum</i> , (M. & H.) Meek .....                       | 38    |
| <i>Helicoceras? angulatum</i> , M. & H.= <i>Heteroceras? angulatum</i> , (M. & H.) Meek .....               | 38    |
| <i>Turritiles cheyennensis</i> , M. & H.= <i>Heteroceras? cheyennensis</i> , (M. & H.) Meek .....           | 38    |
| <i>Nautilus orbiculatus</i> , Tuomey=? <i>Aturia orbiculata</i> , (Tuomey) Meek .....                       | 38    |
| <i>Belemnites paxillosa</i> , Lamarck= <i>Belemnitella paxillosa</i> , (Lamarck) Meek .....                 | 38    |
| <i>Vermetus rotula</i> , Morton= <i>Spirulæa rotula</i> , (Morton) Meek .....                               | 38    |

JURASSIC.

|                                                                                                |    |
|------------------------------------------------------------------------------------------------|----|
| <i>Camptonectes</i> , Agassiz, MSS. [1864] .....                                               | 39 |
| <i>Pecten bellistriatus</i> , Meek= <i>Camptonectes bellistriatus</i> , Meek .....             | 39 |
| <i>Pecten extenuatus</i> , M. & H.= <i>Camptonectes? extenuatus</i> , (M. & H.) Meek .....     | 39 |
| <i>Avicula? curta</i> , Hall= <i>Eumicrotis curta</i> , (Hall) Meek .....                      | 39 |
| <i>Oxytoma</i> , Meek .....                                                                    | 39 |
| <i>Avicula munsteri</i> , Brown= <i>Pteria (Oxytoma) munsteri</i> , (Brown?) Meek .....        | 39 |
| <i>Modiola pertenuis</i> , M. & H.= <i>Volsella pertenuis</i> , (M. & H.) Meek .....           | 40 |
| <i>Modiola (Perna) formosa</i> , M. & H.= <i>Volsella formosa</i> , (M. & H.) Meek .....       | 40 |
| <i>Venus unionides</i> , Römer= <i>Myacites unionoides</i> , (Römer) Meek .....                | 40 |
| <i>Neritina nebrascensis</i> , Meek= <i>Neritella nebrascensis</i> , M. & H. ....              | 40 |
| <i>Lioplacodes</i> , Meek .....                                                                | 40 |
| <i>Melania (Potadoma) veterna</i> , M. & H.= <i>Lioplacodes veterna</i> , (M. & H.) Meek ..... | 40 |

46.

MEEK, F. B. Check lists of the Invertebrate fossils of North America. Miocene. <Smithsonian Miscellaneous Collections (No. 183), pp. 1-32, 1864. Washington, 1867.

Contains, besides the list, "Notes and explanations" of generic and specific characters.

MIOCENE.

|                                                                                                  | Page. |
|--------------------------------------------------------------------------------------------------|-------|
| <i>Columnaria? sexradiata</i> , Lonsdale= <i>Septastrea (?) sexradiata</i> , (Lonsd.) Meek ..... | 25    |
| <i>Lithodendron lineata</i> , Conrad= <i>Cladocora (?) lineata</i> , (Con.) Meek .....           | 25    |
| <i>Orbicula lugubris</i> , Conrad= <i>Discina lugubris</i> , (Con.) Meek .....                   | 25    |
| <i>Orbicula multilineata</i> , Conrad= <i>Discina multilineata</i> , (Con.) Meek .....           | 25    |
| <i>Terebratula nitens</i> , Conrad= <i>Rhynchonella nitens</i> , (Con.) Meek .....               | 25    |
| <i>Hinnites giganteus</i> , Gray= <i>Hinnites crassus</i> , Conrad .....                         | 26    |
| <i>Janira affinis</i> , Tuomey & Holmes= <i>Pecten affinis</i> , (T. & H.) Meek .....            | 26    |
| <i>Janira bella</i> , Conrad= <i>Pecten bella</i> , (Con.) Meek .....                            | 26    |
| <i>Amussium propatulum</i> = <i>Pecten propatulus</i> , Conrad .....                             | 26    |
| <i>Nucula impressa</i> , Conrad= <i>Yoldia impressa</i> , (Con.) Meek .....                      | 27    |
| <i>Leda willamettensis</i> , Shumard= <i>Nuculana willamettensis</i> , (Shum.) Meek .....        | 27    |
| <i>Nucula penita</i> , Conrad= <i>Nuculana penita</i> , (Con.) Meek .....                        | 27    |
| <i>Leda oregona</i> , Shumard= <i>Nuculana oregona</i> , (Shum.) Meek .....                      | 27    |

|                                                                                                              | Page. |
|--------------------------------------------------------------------------------------------------------------|-------|
| <i>Nucula divaricata</i> , Conrad = <i>Nucula (Acila) Conradi</i> , Meek .....                               | 27    |
| <i>Pectunculus nitens</i> , Conrad = <i>Limopsis nitens</i> , (Con.) Meek .....                              | 27-28 |
| <i>Arca canalis</i> , Conrad = <i>Anadara ? canalis</i> , (Con.) Meek .....                                  | 28    |
| <i>Arca congesta</i> , Conrad = <i>Anadara ? congesta</i> , (Con.) Meek .....                                | 28    |
| <i>Arca incile</i> , Say = <i>Anadara incile</i> , (Say) Meek .....                                          | 28    |
| <i>Arca microdonta</i> , Conrad = <i>Anadara microdonta</i> , (Con.) Meek .....                              | 28    |
| <i>Anomalocardia trigintinaria</i> , Conrad = <i>Anadara trigintinaria</i> , (Con.) Meek .....               | 28    |
| <i>Arca protracta</i> , H. D. & W. B. Rogers = <i>Anadara protracta</i> , (Rogers) Meek .....                | 28    |
| <i>Arca trilineata</i> , Conrad = <i>Anadara trilineata</i> , (Con.) Meek .....                              | 28    |
| <i>Avicula multangula</i> , H. C. Lea = <i>Pteria [?] multangula</i> , (H. C. Lea) Meek .....                | 28    |
| <i>Perna montana</i> , Conrad = <i>Melina montana</i> , (Con.) Meek .....                                    | 28    |
| <i>Perna t[er]ta</i> , Say = <i>Melina torta</i> , (Say) Meek .....                                          | 28    |
| <i>Modiola contracta</i> , Conrad = <i>Volsella contracta</i> , (Conrad) Meek .....                          | 28    |
| <i>Modiola spiniger</i> , H. C. Lea = <i>Volsella [?] spinigera</i> , (H. C. Lea) Meek .....                 | 28    |
| <i>Modiola ducatelli</i> , Conrad = <i>Volsella ducatelli</i> , (Conrad) Meek .....                          | 28    |
| <i>Mytilus inflatus</i> , Tuomey & Holmes = <i>Volsella inflata</i> , (T. & H.) Meek .....                   | 28    |
| <i>Cardita abbreviata</i> , Conrad = <i>Venericardia (Pteromeris) abbreviata</i> , (Con.) Meek .....         | 28    |
| <i>Cardita radians</i> , Conrad = <i>Venericardia (Pteromeris) radians</i> , (Con.) Meek .....               | 29    |
| <i>Cardita carinata</i> , Emmons = <i>Venericardia (Cardiocardites) carinata</i> , (Emm.) Meek .....         | 29    |
| <i>Cardita subenta</i> , Conrad = <i>Venericardia (Cardiocardites) sub[ter]enta</i> , (Con.) Meek .....      | 29    |
| <i>Cardita monilicosta</i> , Gabb. = <i>Venericardia (Cardiocardites) monilicosta</i> , (Gabb.) Meek .....   | 29    |
| <i>Cardita occidentalis</i> , Conrad = <i>Venericardia (Cardiocardites) occidentalis</i> , (Con.) Meek ..... | 29    |
| <i>Lucina occidentalis</i> , Conrad .....                                                                    | 29    |
| <i>Cyclas permacra</i> , Conrad = <i>Lucina permacra</i> , (Con.) Meek .....                                 | 29    |
| <i>Venus bisecta</i> , Conrad = <i>Thyatira ? bisecta</i> , (Conrad) Meek .....                              | 29-30 |
| <i>Isocardia fraterna</i> , Say = <i>Glossus fraterna</i> , (Say) Meek .....                                 | 30    |
| <i>Isocardia markoi</i> , Conrad = <i>Glossus markoei</i> , (Conrad) Meek .....                              | 30    |
| <i>Cardium modestum</i> , Conrad = ( <i>Cardium (Cerastoderma) modestum</i> , Conrad .....                   | 30    |
| <i>Venus (Trigona) tantilla</i> , Gould = <i>Psephis tantilla</i> , (Gould) Gabb .....                       | 30    |
| <i>Venus athleta</i> , Conrad = <i>Chione (Lirophora) athleta</i> , (Con.) Meek .....                        | 30    |
| <i>Venus alveata</i> , Conrad = <i>Chione (Lirophora) alveatus</i> , (Con.) Meek .....                       | 30    |
| <i>Venus latilirata</i> , Conrad = <i>Chione (Lirophora) latilirata</i> , (Con.) Meek .....                  | 30    |
| <i>Venus angustifrons</i> , Conrad = <i>Dione angustifrons</i> , (Con.) Meek .....                           | 30    |
| <i>Venus brevilineata</i> , Conrad = <i>Dione ? brevilineata</i> , (Con.) Meek .....                         | 30    |
| <i>Meretrix d[ec]isa</i> , Conrad = <i>Dione decisa</i> , (Conrad) Meek .....                                | 30    |
| <i>Cytherea oregonensis</i> , Conrad = <i>Dione oregonensis</i> , (Con.) Meek .....                          | 30    |
| <i>Meretrix tularana</i> , Conrad = <i>Dione tularana</i> , (Con.) Meek .....                                | 30    |
| <i>Meretrix uniomeris</i> , Conrad = <i>Dione uniomeris</i> , (Con.) Meek .....                              | 30    |
| <i>Cytherea vespertina</i> , Conrad = <i>Dione vespertina</i> , (Con.) Meek .....                            | 30    |
| <i>Solemya protexta</i> = <i>Donax protexta</i> , Conrad .....                                               | 30    |
| <i>Glycimeris estrellanus</i> , Conrad = <i>Panopæa estrellana</i> , (Con.) Meek .....                       | 30    |
| <i>Solen curtus</i> , Conrad = <i>Ensis curtus</i> , (Conrad) Meek .....                                     | 31    |
| <i>Bulla petrosa</i> , Conrad = <i>Cylichna petrosa</i> , (Conrad) Meek .....                                | 31    |
| <i>Tornatella elliptica</i> , Trask = <i>Actæon ellipticus</i> , (Trask) Meek .....                          | 31    |
| <i>Helonyx thallus</i> , (Conrad) Meek = <i>Dentalium thallus</i> , Conrad .....                             | 31    |
| <i>Diodora crucibuliformis</i> , Conrad = <i>Cemoria crucibuliformis</i> , Conrad .....                      | 31    |
| <i>Narica diegoana</i> , Conrad = <i>Vanikoro diegoana</i> , (Con.) Meek .....                               | 31    |
| <i>Crepidula prærupta</i> , Conrad = <i>Crypta prærupta</i> , (Con.) Meek .....                              | 31    |
| <i>Turbo glabrâ</i> , H. C. Lea = <i>Viviparus glaber</i> , (H. C. Lea) Meek .....                           | 31    |
| <i>Natica inezana</i> , Conrad = <i>Natica inezana</i> , Conrad .....                                        | 31    |
| <i>Sinum scopulosum</i> , Meek ? = <i>Sigaretus scopulosus</i> , Conrad .....                                | 31-32 |
| <i>Sycotypus ocoyanus</i> , Conrad = <i>Ficus [?] ocoyanus</i> , (Conrad) Meek .....                         | 32    |
| <i>Pyrgula modesta</i> , Conrad = <i>Ficus modestus</i> , (Conrad) Meek .....                                | 32    |
| <i>Oliva ancillariformis</i> , H. C. Lea = <i>Olivella ancillariformis</i> , (H. C. Lea) Meek .....          | 32    |
| <i>Fusus Oregonensis</i> , Conrad = <i>Busycyon ? Oregonensis</i> , (Conrad) Meek .....                      | 32    |
| <i>Colus aretatus</i> , Conrad = <i>Fusus aretatus</i> , (Conrad) Meek .....                                 | 32    |
| <i>Fusus migrans</i> , Conrad = <i>Tritonifusus migrans</i> , (Con.) Meek .....                              | 32    |
| <i>Nautilus angustatus</i> , Conrad = ? <i>Aturia angustatus</i> , (Con.) Meek .....                         | 32    |

## 47.

- MEEK, F. B. Note on *Bellinurus Danae*, from the Illinois Coal-measures. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 257, 258. 1867. New Haven, 1867.

In this note the author expresses the opinion that *Bellinurus danae*, Meek and Worthen, properly belongs to the recently proposed genus *Prostwichia*, Woodward.



48.

MEEK, F. B. Note on a new genus of fossil Crustacea. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 394, 395. 1867. New Haven, 1867.

Genus Eupröops. This genus was afterward fully described and illustrated in vol. iii of Worthen's Illinois Geological Reports.

49.

MEEK, F. B. On the punctate shell-structure of Syringothyris. <Am. Journ. Sci., vol. xliii, 2d ser., pp. 407, 408. 1867. New Haven, 1867.

50.

MEEK, F. B. Remarks on Professor Geinitz's views respecting the Upper Paleozoic rocks and Fossils of Southeastern Nebraska. <Am. Journ. Sci., vol. xliiv, 2d ser., pp. 170-187; continued, pp. 327-339; notes to the same pp. 282, 283. 1867. New Haven, 1867.

This is an extended discussion and criticism of Dr. Geinitz's "Carbon formation und Dyas in Nebraska." The following fossils are discussed especially:

|                                                             | Page    |
|-------------------------------------------------------------|---------|
| <i>Serpula (Spirorbis) planorbites</i> , Münster.....       | 177     |
| <i>Euomphalus rugosus</i> , Hall.....                       | 177     |
| <i>Spirorbis helix</i> , King.....                          | 178     |
| <i>Murchisonia subtoniata</i> , Geinitz.....                | 178     |
| <i>Orthonema subtoniata</i> , Geinitz, sp.....              | 178     |
| <i>Bellerophon interlineatus</i> , Portlock.....            | 178     |
| <i>Bellerophon marcouanus</i> , Geinitz.....                | 178     |
| <i>Macrocheilus pallianus</i> , Geinitz.....                | 178     |
| <i>Allorisma elegans</i> , King.....                        | 178     |
| <i>Solenomya biarmica</i> , de Verneuil.....                | 178-179 |
| <i>Astarte gibbosa</i> , McCoy.....                         | 179     |
| <i>Astarte nebrascensis</i> , Geinitz.....                  | 179     |
| <i>Astarte mortonensis</i> , Geinitz.....                   | 179     |
| <i>Astarte vallisnerianus</i> , King.....                   | 179     |
| <i>Schizodus obscurus</i> , Sowerby.....                    | 179     |
| <i>Schizodus rossicus</i> , de Verneuil.....                | 179     |
| <i>Arca striata</i> , Schlotheim.....                       | 179-180 |
| <i>Macrodon tenuistriata</i> , M. & W.....                  | 179-180 |
| <i>Nucula kazanensis</i> , de Verneuil.....                 | 180     |
| <i>Leda bellistriata</i> , Stevens.....                     | 180     |
| <i>Nucula heyrichi</i> , Schlotheim.....                    | 180     |
| <i>Clidophorus pallasi</i> , M. V. & King.....              | 180-181 |
| <i>Clidophorus (Pleurophorus) simplex</i> , Keyserling..... | 181     |
| <i>Pleurophorus subcuneatus</i> , M. & H.....               | 181     |
| <i>Clidophorus solencoides</i> , Geinitz.....               | 181     |
| <i>Aucella Hausmanni</i> (Goldf.), Geinitz.....             | 182     |
| <i>Myalina swallowi</i> , McChesney.....                    | 182     |
| <i>Mytilus concavus?</i> (Swallow), Geinitz.....            | 182     |
| <i>Myalina perattenuata</i> (M. & H.), Geinitz.....         | 182     |
| <i>Myalina subquadrata</i> (Shumard), Geinitz.....          | 182     |
| <i>Avicula speluncaria</i> (Schlotheim), Geinitz.....       | 182     |
| <i>Monotis hawni</i> , M. & H.....                          | 182     |
| <i>Pseudomonotis hawni</i> , M. & H.....                    | 182     |
| <i>Pseudomonotis sinuata</i> .....                          | 182     |
| <i>Avicula pinniformis</i> , Geinitz.....                   | 182     |
| <i>Gervillia parva</i> (M. & H.), Geinitz.....              | 182-183 |
| <i>Gervillia longa</i> , Geinitz.....                       | 183     |
| <i>Gervillia (avicula) sulcata</i> , Geinitz.....           | 183     |
| <i>Pecten neglectus</i> , Geinitz.....                      | 183     |
| <i>Pecten Missouriensis?</i> (Shumard), Geinitz.....        | 183     |
| <i>Pecten hawni</i> , Geinitz.....                          | 183     |
| <i>Pecten broadheadii</i> , Swallow.....                    | 183     |
| <i>Aviculopecten hawni</i> .....                            | 183     |



|                                                            | Page.   |
|------------------------------------------------------------|---------|
| <i>Rhynchonella angulata</i> , (Linnæus), Geinitz.....     | 183     |
| <i>Camaropharia globulina</i> , (Phillips), Geinitz .....  | 183     |
| <i>Rhynchonella uta</i> , Marcou.....                      | 183     |
| <i>Retzia mormonii</i> (Marcou sp.), Geinitz.....          | 184     |
| <i>Athyris subtilita</i> , Hall.....                       | 184     |
| <i>Spirifer moosakpaliensis</i> , Davidson .....           | 184     |
| <i>Spirifer cameratus</i> (Morton), Geinitz.....           | 184     |
| <i>Spirifer laminosus</i> (McCoy), Geinitz.....            | 184     |
| <i>Spiriferina kentuckensis</i> , Shumard.....             | 184     |
| <i>Orthisina missouriana</i> , Swallow .....               | 185     |
| <i>Plicatula striato-costata</i> , Cox .....               | 185     |
| <i>Productus horrescens</i> .....                          | 185     |
| <i>Productus rogersii</i> .....                            | 185     |
| <i>Productus nebrascensis</i> , Owen .....                 | 185     |
| <i>Productus flemingii</i> .....                           | 185     |
| <i>Productus prattenianus</i> , Norwood.....               | 185     |
| <i>Productus koninckianus</i> (de Verneuil), Geinitz.....  | 185     |
| <i>Productus cancrini</i> (de Verneuil), Geinitz.....      | 186     |
| <i>Productus orbignianus</i> (de Koninck), Geinitz .....   | 186     |
| <i>Productus longispinus</i> , Sowerby.....                | 186     |
| <i>Productus horridus</i> (Sowerby), Geinitz.....          | 186     |
| <i>Chonetes mucronata</i> (M. & W.), Geinitz.....          | 186     |
| <i>Chonetes glabra</i> , Geinitz.....                      | 186     |
| <i>Cyathocrinus ramosus</i> (Schlothheim), Geinitz .....   | 186     |
| <i>Cyathocrinus inflexus</i> , Geinitz .....               | 186     |
| <i>Poteroocrinus hemisphericus</i> , Shumard .....         | 186     |
| <i>Eccidaris hallianus</i> , Geinitz.....                  | 187     |
| <i>Polypora marginata</i> (McCoy), Geinitz.....            | 187     |
| <i>Polypora biarmica</i> (Keyserling), Geinitz.....        | 187     |
| <i>Synocladia virgulacea</i> (Phillips), Geinitz .....     | 187     |
| <i>Aviculopinna pinnaformis</i> .....                      | 282     |
| <i>Aviculopinna Americana</i> , n. s., Meek, 1867 .....    | 283     |
| <i>Cyathaxonia</i> .....                                   | 328     |
| <i>Allorisma elegans</i> , King .....                      | 328     |
| <i>Schizodus rossicus</i> , de Verneuil .....              | 328     |
| <i>Aucella hausmanni</i> , Goldf .....                     | 329     |
| <i>Spirifer laminosus</i> , McCoy.....                     | 329     |
| <i>Lima retifera</i> , Shumard.....                        | 329     |
| <i>Stenophora columnaris</i> , Schlot., sp.....            | 329-330 |
| <i>Synocladia virgulacea</i> , Geinitz, not Phillips ..... | 330     |
| <i>Synocladia biserialis</i> , Swallow.....                | 330     |

## 51.

:

MEEK, F. B. Note on the genus *Palaeacis*, Haime, 1860 (= *Sphenopoterium*, M. & W., 1866.) <Am. Journ. Sci., vol. xlv, 2d ser., pp. 419, 420. 1867. New Haven, 1867.

The author here takes the view that *Sphenopoterium*, originally published in the Illinois Geol. Reports, is identical with *Palaeacis*.

|                                          | Page.   |
|------------------------------------------|---------|
| <i>Palaeacis obtusa</i> , M. & W.....    | 419-420 |
| <i>Palaeacis umbonata</i> , Seebach..... | 420     |
| <i>Palaeacis cymbia</i> , Seebach.....   | 420     |

## 52.

MEEK, F. B. Fossils from the west coast of Kennedy Channel. <Hayes's "Open Polar Ocean," London, 1867, p. 341.

Describes various fossils collected by Dr. Hayes on the west coast of Kennedy's Channel, from deposits of lower Helderberg age. *Zaphrentis hayesi* and *Loxonema ? kanei* are described as new species. A preliminary notice appeared in Am. Journ. Sci. and Arts, ser. 2, vol. xl, pp. 31-34. New Haven, 1865.

For list of species see entry number 33, p. 36.

53.

MEEK, F. B. Preliminary notice of a remarkable new genus of corals, probably typical of a new family; forwarded for study by Prof. J. D. Whitney, from the Silurian rocks of Nevada Territory. <Am. Journ. Sci., vol. xlv, 2d ser., pp. 62-64. 1868. New Haven.

|                                                        | Page. |
|--------------------------------------------------------|-------|
| <i>Ethmophyllum</i> , n. g., Meek, 1868.....           | 62-64 |
| <i>Ethmophyllum whitneyi</i> , n. s., Meek, 1868.....  | 64    |
| <i>Ethmophyllum gracile</i> , n. s., ? Meek, 1868..... | 64    |

54.

MEEK, F. B. Note on the shell-structure and family affinities of the genus *Aviculopecten*. <Am. Journ. Sci., vol. xlv, 2d ser., pp. 64, 65. 1868. New Haven, 1868.

The author shows that by the shell-structure the *Aviculopectens* are allied to *Avicula* rather than to *Pecten*.

55.

MEEK, F. B., and WORTHEN, A. H. Preliminary notice of a *Scorpion*, a *Eurypterus*? and other fossils, from the Coal-measures of Illinois. <Am. Jour. Sci., vol. xvi, 2d ser., pp. 19-28. 1868. New Haven, 1868.

Afterward fully described and illustrated in one of the Illinois Geological Reports, vol. iii.

|                                                                           | Page. |
|---------------------------------------------------------------------------|-------|
| <i>Eurypterus (Anthraconectes) mazonensis</i> , n. s., M. & W., 1868..... | 19-21 |
| <i>Adelophthalmus mazonensis</i> ?.....                                   | 22    |
| <i>Ceraticaris? sinuatus</i> , n. s., M. & W., 1868.....                  | 22    |
| <i>Butus? carbonarius</i> , n. s., M. & W., 1868.....                     | 22-24 |
| <i>Scorpio carbonarius</i> , n. s., M. & W., 1868.....                    | 22-24 |
| <i>Eoscorpius</i> , n. g.? M. & W., 1868.....                             | 24-25 |
| <i>Euphoberia</i> , n. g., M. & W., 1868.....                             | 25-26 |
| <i>Euphoberia armigera</i> , n. s., M. & W., 1868.....                    | 26    |
| <i>Euphoberia major</i> , n. s., M. & W., 1868.....                       | 26    |
| <i>Acanthotelson</i> .....                                                | 27-28 |
| <i>Acanthotelson eveni</i> , n. s., M. & W., 1868.....                    | 28    |
| <i>Palaocaris</i> .....                                                   | 28    |
| <i>Gampsonyx</i> .....                                                    | 28    |
| <i>Anthracerpes</i> .....                                                 | 28    |

56.

MEEK, F. B. Note on *Ethmophyllum* and *Archeocyathus*. <Am. Journ. Sci., vol. xvi, 2d ser., p. 144. 1868. New Haven, 1868.

The author abandons his formerly proposed genus *Ethmophyllum*, believing it to be identical with *Archeocyathus* of Billings.

57.

MEEK, F. B., and WORTHEN, A. H. Notes on some points in the Structure and Habits of the Paleozoic Crinoidea. <Proc. Acad. Nat. Sci. Phila., vol. xx, pp. 323-334. 1868. Philadelphia, 1868.

Afterward republished in the Illinois Geological Reports, vol. v, and in Amer. Jour. Sci. and Canad. Nat. See entries Nos. 61 and 64.

|                                                                             | Page.   |
|-----------------------------------------------------------------------------|---------|
| <i>Synbathocrinus</i> , Phillips.....                                       | 323     |
| <i>Goniasteroidocrinus</i> , Lyon & Casseday.....                           | 323-324 |
| <i>Cyathocrinus</i> , Miller.....                                           | 324-325 |
| Convolutal support of the digestive sack, in the <i>Actinocrinidæ</i> ..... | 325-327 |
| Ambulacral canals passing under the vault of the <i>Actinocrinidæ</i> ..... | 327-334 |

58.

MEEK, F. B., and WORTHEN, A. H. Remarks on some types of Carboniferous Crinoidea, with descriptions of new Genera and Species of the same, and of one Echinoid. <Proc. Acad. Nat. Sci. Phila., vol. xx, pp. 335-359. 1868. Philadelphia, 1868.

Genera Barycrinus, Nipterocrinus. Afterward republished in the Illinois Geological Reports, vol. v.

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>Cyathocrinites</i> , Miller.....                                            | 336-337 |
| <i>Cyathocrinites fragilis</i> , n. s., M. & W., 1868 .....                    | 337     |
| <i>Cyathocrinites tenuidactylus</i> , n. s., M. & W., 1868.....                | 337-338 |
| <i>Barycrinus</i> ,* n. g., Wachsmuth MS.....                                  | 338-340 |
| <i>Barycrinus magnificus</i> , n. s., M. & W., 1868.....                       | 340-341 |
| <i>Barycrinus hoveyi</i> var. <i>herculeus</i> , M. & W., 1868 .....           | 341     |
| <i>Nipterocrinus</i> ,† n. g., Wachsmuth, MS .....                             | 341-342 |
| <i>Nipterocrinus wachsmuthi</i> , n. s., M. & W., 1868.....                    | 342-343 |
| <i>Catillocrinus</i> , Troost.....                                             | 343     |
| <i>Catillocrinus bradleyi</i> , n. s., M. & W., 1868.....                      | 343     |
| <i>Dichocrinus</i> , Munster.....                                              | 343     |
| <i>Dichocrinus expansus</i> , n. s., M. & W., 1868.....                        | 343-344 |
| <i>Dorycrinus</i> , Roemer.....                                                | 344-345 |
| <i>Dorycrinus roemeri</i> , n. s., M. & W., 1868 .....                         | 346     |
| <i>Dorycrinus quinquelobus</i> , var. <i>intermedius</i> , M. & W., 1866 ..... | 346-347 |
| <i>Amphoracrinus</i> , Austin.....                                             | 347-348 |
| <i>Amphoracrinus divergens</i> , Hall, sp., 1860.....                          | 348-349 |
| <i>Batocrinus</i> , Casseday .....                                             | 349-352 |
| Subgenus <i>Eretmocrinus</i> , Lyon & Casseday .....                           | 351     |
| Subgenus <i>Alloprosallocrinus</i> , Casseday & Lyon.....                      | 352     |
| <i>Batocrinus quasillus</i> , n. s., M. & W., 1868 .....                       | 352-353 |
| <i>Batocrinus cassedayanus</i> , n. s., M. & W., 1868 .....                    | 353-354 |
| <i>Batocrinus trochiscus</i> , n. s., M. & W., 1868 .....                      | 354-355 |
| <i>Batocrinus (Eretmocrinus) neglectus</i> , n. s., M. & W., 1868 .....        | 355-356 |
| <i>Pentremites</i> , Say .....                                                 | 356     |
| <i>Pentremites (Troostocrinus?) woodmani</i> , n. s., M. & W., 1868.....       | 356     |
| <i>Agelacrinites</i> Vanuxem.....                                              | 357     |
| <i>Agelacrinites (Lepidodiscus) squamosus</i> , n. s., M. & W., 1868 .....     | 357-358 |
| <i>Echinoidea</i> .....                                                        | 358     |
| <i>Oligoporus</i> , M. & W .....                                               | 358     |
| <i>Oligoporus nobilis</i> , n. s., M. & W., 1868 .....                         | 358-359 |

59.

MEEK, F. B., and WORTHEN, A. H. Paleontology. <Geological Survey of Illinois, vol. iii, pp. 291-565, plates 1-20. 1868. Springfield, 1868.

Published by authority of the legislature of Illinois, 1868.  
Silurian, Devonian, and Carboniferous.

LOWER SILURIAN SPECIES.

|                                                                                                      | Page.   |
|------------------------------------------------------------------------------------------------------|---------|
| TRENTON GROUP.                                                                                       |         |
| <i>Radiata</i> .....                                                                                 | 291     |
| <i>Echinodermata</i> .....                                                                           | 291     |
| <i>Cystoidea</i> .....                                                                               | 291     |
| <i>Comarocystites</i> , Billings, 1854 .....                                                         | 291     |
| <i>C. shumardi</i> , M. & W., 1865, fig. —, p. 292, and pl. i, figs. 1 <i>a</i> , <i>b</i> .....     | 292-294 |
| <i>C. shumardi</i> , var. <i>obconicus</i> , M. & W., 1865, pl. i, figs. 2 <i>a</i> , <i>b</i> ..... | 294     |
| <i>Mollusca</i> .....                                                                                | 294     |
| <i>Lamellibranchiata</i> .....                                                                       | 294     |
| <i>Modiolopsis</i> , Hall, 1847.....                                                                 | 294     |
| <i>M. modioliformis</i> , n. s., M. & W., 1868, pl. i, figs. 7 <i>b</i> and 8 .....                  | 294-295 |
| <i>M. orthonota</i> , n. s., M. & W., 1868, pl. i, fig. 7 <i>a</i> .....                             | 295-296 |
| <i>Cypricardites</i> , Conrad, 1841 .....                                                            | 297     |
| <i>Vanuxemia</i> , Billings, 1858 .....                                                              | 297     |
| <i>V. ? dixonensis</i> , M. & W., 1866, pl. i, figs. 5 <i>a</i> , <i>b</i> .....                     | 207-298 |

\* βαρύς, heavy; κρίνον, a lily.

† νιπτήρ, a washing vessel; κρίνον, a lily.



|                                                                                                                     | Page.   |
|---------------------------------------------------------------------------------------------------------------------|---------|
| <i>Cephalopoda</i> .....                                                                                            | 298     |
| <i>Orthoceras</i> , Auct .....                                                                                      | 298     |
| <i>O. (Ormoceras) backii</i> , Stokes? 1837, pl. i, fig. 4.....                                                     | 298-299 |
| <i>Articulata</i> :                                                                                                 |         |
| <i>Crustacea</i> .....                                                                                              | 299     |
| <i>Lichas</i> , Dalman, 1827 .....                                                                                  | 299     |
| <i>L. cucullus</i> , M. & W, 1865 .....                                                                             | 299-300 |
| FOSSILS OF THE GALENA BEDS.                                                                                         |         |
| <i>Protozoa</i> .....                                                                                               | 301     |
| <i>Receptaculites</i> , DeFrance, 1827.....                                                                         | 301     |
| <i>R. globularis</i> , Hall, 1861, pl. ii, figs. 2 <i>a</i> , <i>b</i> .....                                        | 301     |
| <i>R.</i> ———? pl. ii, figs. 1 <i>a</i> , <i>b</i> .....                                                            | 301-302 |
| <i>R. oweni</i> , Hall, 1861, pl. ii, fig. 3 .....                                                                  | 302-303 |
| <i>Radiata</i> .....                                                                                                | 304     |
| <i>Zoophyta</i> .....                                                                                               | 304     |
| ? <i>Chaetetes</i> , Fischer, 1837 .....                                                                            | 304     |
| <i>C. petropolitanus</i> , Pander? sp., 1830, pl. ii, figs. 8 <i>a</i> , <i>b</i> .....                             | 304-305 |
| <i>Mollusca</i> .....                                                                                               | 305     |
| <i>Brachiopoda</i> .....                                                                                            | 305     |
| <i>Lingula</i> , Brugiere, 1792.....                                                                                | 305     |
| <i>L. quadrata</i> , Eichwald, 1829, pl. ii, fig. 4 <i>a-c</i> .....                                                | 305-306 |
| <i>Lamellibranchiata</i> .....                                                                                      | 306     |
| <i>Ambonychia</i> , Hall, 1847.....                                                                                 | 306     |
| <i>A. intermedia</i> , n. s., M. & W., 1868, pl. ii, figs. 5 <i>a</i> , <i>b</i> .....                              | 306-307 |
| <i>Tellinomya</i> , Hall, 1847 (not <i>Tellinya</i> , Brown, 1827= <i>Tellinomya</i> , Agassiz, 1846).....          | 307     |
| <i>T. ventricosa</i> , Hall, 1861, pl. ii, figs. 7 <i>a</i> , <i>b</i> , <i>c</i> .....                             | 307-308 |
| <i>T. alta</i> , Hall, 1861, pl. ii, figs. 6 <i>a</i> , <i>b</i> .....                                              | 309     |
| <i>Cypricardites</i> , Conrad, 1841 .....                                                                           | 309-310 |
| <i>C.</i> ———? pl. iii, figs. 9 <i>a</i> , <i>b</i> , <i>c</i> , <i>d</i> .....                                     | 311     |
| <i>C. obliquus</i> , n. s., M. & W., 1868, pl. ii, figs. 9 <i>a</i> , <i>b</i> .....                                | 311-312 |
| <i>Gasteropoda</i> .....                                                                                            | 312     |
| <i>Bellerophon</i> , Montfort, 1808.....                                                                            | 312     |
| <i>B. (Bucania?) platystoma</i> , n. s., M. & W., 1868, pl. iii, figs. 8 <i>a</i> , <i>b</i> .....                  | 312-313 |
| <i>Ophileta</i> , Vanuxem, 1842.....                                                                                | 313     |
| <i>O. owenana</i> , n. s., M. & W., 1868, pl. iii, figs. 6 <i>a</i> , <i>b</i> .....                                | 313-314 |
| <i>Trochonema</i> , Salter, 1857 .....                                                                              | 314     |
| <i>T. umbilicata</i> , Hall? sp., 1847, pl. iii, figs. 5 <i>a</i> , <i>b</i> .....                                  | 314-315 |
| <i>Raphistoma</i> , Hall, 1847 .....                                                                                | 316     |
| <i>R. lenticularis</i> , Conrad, sp., 1842, pl. iii, figs. 7 <i>b</i> , ( <i>a</i> , <i>c</i> ?) .....              | 316-317 |
| <i>Murchisonia</i> , d'Archiac & d'Verneuil, 1841 .....                                                             | 317     |
| <i>M. bicincta</i> , Hall? 1847, pl. iii, fig. 4 .....                                                              | 317-318 |
| <i>Cephalopoda</i> .....                                                                                            | 318     |
| <i>Orthoceras</i> , Auct .....                                                                                      | 318     |
| <i>O. anellum</i> , Conrad, 1843, pl. iii, fig. 3 .....                                                             | 318-320 |
| <i>Articulata</i> .....                                                                                             | 320     |
| <i>Crustacea</i> .....                                                                                              | 320     |
| <i>Illicenus</i> , Dalman, 1826 .....                                                                               | 320     |
| <i>I. taurus</i> , Hall, 1861, pl. iii, fig. 2.....                                                                 | 320-322 |
| <i>I. crassicauda</i> , Wahlenb.?? 1821, pl. iii, figs. 1 <i>a</i> , <i>b</i> .....                                 | 322-323 |
| FOSSILS OF THE CININNATI GROUP.                                                                                     |         |
| <i>Radiata</i> .....                                                                                                | 324     |
| <i>Echinodermata</i> .....                                                                                          | 324     |
| <i>Crinoidea</i> .....                                                                                              | 324     |
| <i>Heterocrinus</i> , Hall, 1847.....                                                                               | 324     |
| <i>H. crassus</i> , M. & W., 1865, pl. iv, figs. 1 <i>a</i> , <i>b</i> , <i>c</i> .....                             | 324-325 |
| <i>H. subcrassus</i> , M. & W., 1865, pl. iv, figs. 5 <i>a-d</i> .....                                              | 325-326 |
| <i>Hybocrinus</i> , Billings, 1866 .....                                                                            | 327     |
| Subgenus <i>Anomalocrinus</i> , M. & W .....                                                                        | 328     |
| <i>Hybocrinus? incurvus</i> , M. & W., 1865, pl. iv, fig. 3 <i>a</i> , <i>b</i> , and p. 327, fig. — .....          | 327-329 |
| <i>Porocrinus</i> , Billings, 1856.....                                                                             | 329-330 |
| <i>P. crassus</i> , M. & W., 1865, p. 330, fig. <i>a</i> , <i>b</i> , and pl. iv, figs. 2 <i>a</i> , <i>b</i> ..... | 330-332 |
| <i>P. pentagonius</i> , M. & W., 1865, pl. i, fig. 3 .....                                                          | 332-333 |
| <i>Dendrocrinus</i> , Hall, 1852 .....                                                                              | 333     |
| <i>D. oswegöensis</i> , n. s., M. & W., 1868, p. 333, fig. —, and pl. iv, fig. 4 .....                              | 333-334 |



|                                                                                                | Page.   |
|------------------------------------------------------------------------------------------------|---------|
| Mollusca .....                                                                                 | 335     |
| Brachiopoda .....                                                                              | 335     |
| <i>Strophomena</i> , Rafinesque, 1820? .....                                                   | 335     |
| <i>S. unicostata</i> , n. s., M. & W., 1868, pl. iv, figs. 11 <i>a</i> , <i>b</i> .....        | 335-337 |
| Lamellibranchiata .....                                                                        | 337     |
| <i>Ambonychia</i> , Hall, 1847 .....                                                           | 337     |
| Subgenus <i>Megaptera</i> , M. & W., 1866 .....                                                | 337     |
| <i>Megaptera casei</i> , M. & W., 1866, pl. iv, figs. 9 <i>a</i> , <i>b</i> .....              | 337-338 |
| <i>Dolabra</i> , McCoy, 1844 .....                                                             | 339     |
| <i>D. sterlingensis</i> , M. & W., 1866, pl. iv, figs. 10 <i>a</i> , <i>b</i> , <i>c</i> ..... | 339-340 |
| Gasteropoda .....                                                                              | 340     |
| <i>Cyrtolites</i> , Conrad, 1838 .....                                                         | 340     |
| <i>C. imbricatus</i> , n. s., M. & W., 1868, pl. iv, fig. 12 .....                             | 340-341 |
| Pteropoda .....                                                                                | 341     |
| <i>Tentaculites</i> , Schlotheim, 1820 .....                                                   | 341     |
| <i>T. tenuistriatus</i> , M. & W., 1865, pl. iv, figs. 7 <i>a</i> , <i>b</i> .....             | 341-342 |
| <i>T. oswegoensis</i> , M. & W., 1865, pl. iv, fig. 6 <i>a</i> .....                           | 342-343 |
| <i>T. sterlingensis</i> , M. & W., 1865, pl. iv, fig. 8 .....                                  | 343     |

## UPPER SILURIAN SPECIES.

## FOSSILS OF THE NIAGARA GROUP.

|                                                                                                                |         |
|----------------------------------------------------------------------------------------------------------------|---------|
| Protozoa .....                                                                                                 | 344     |
| Spongiae .....                                                                                                 | 344     |
| <i>Astylospongia</i> , Rømer .....                                                                             | 344     |
| <i>A. ?? christiani</i> , n. s., M. & W., 1868, pl. v, figs. 3 <i>a</i> , <i>b</i> , <i>c</i> .....            | 344-345 |
| <i>Pasceolus</i> , Billings, 1853 .....                                                                        | 345     |
| <i>P. ? dactylioides</i> , Owen, sp., 1844, pl. v, figs. 2 <i>a</i> , <i>b</i> , <i>c</i> .....                | 345-346 |
| Radiata .....                                                                                                  | 347     |
| Echinodermata .....                                                                                            | 347     |
| <i>Saccocrinus</i> , Hall, 1852 .....                                                                          | 347     |
| <i>S. christyi</i> , Hall? sp., 1863, pl. v, fig. 1 .....                                                      | 347-349 |
| Mollusca .....                                                                                                 | 349     |
| Brachiopoda .....                                                                                              | 349     |
| <i>Hemipronites</i> , Pander, 1830 .....                                                                       | 349     |
| <i>H. subplanus</i> , Conrad? sp., 1842, pl. vi, figs. 6 <i>a</i> , <i>b</i> .....                             | 349-351 |
| <i>Obolus</i> , Eichwald, 1829 .....                                                                           | 351     |
| <i>O. [Trimerella?] conradi</i> , Hall, 1868, pl. v, figs. 7 <i>a</i> , <i>b</i> .....                         | 351-352 |
| <i>Centronella</i> , Billings, 1859 .....                                                                      | 352     |
| <i>C. billingsiana</i> , n. s., M. & W., 1868, p. 352, figs. <i>a-c</i> , and pl. vi, figs. 5 <i>a-c</i> ..... | 352-353 |
| <i>Meristella</i> , Hall, 1860 .....                                                                           | 354     |
| <i>Meristella?</i> sp., pl. vi, figs. 4 <i>a</i> , <i>b</i> .....                                              | 354     |
| Lamellibranchiata .....                                                                                        | 354     |
| <i>Pterinea</i> , Goldfuss, 1832 .....                                                                         | 354     |
| <i>P. thebesensis</i> , n. s., M. & W., 1868, page 354, fig. —, and pl. vi, fig. 3 .....                       | 354-355 |
| <i>Ambonychia</i> , Hall, 1847 .....                                                                           | 356     |
| <i>A. acutirostris</i> , Hall? 1865, pl. v, figs. 8 <i>a</i> , <i>b</i> , and 9 <i>c</i> .....                 | 356-357 |
| <i>Amphicælia</i> , Hall, 1864 .....                                                                           | 357-358 |
| <i>A. neglecta</i> , McCheney, 1861, pl. v, figs. 9 <i>a</i> , <i>b</i> (not <i>c</i> ) .....                  | 358-359 |
| Gasteropoda .....                                                                                              | 359     |
| <i>Pleurotomaria</i> , Defrance, 1824 .....                                                                    | 359     |
| <i>P. casii</i> , n. s., M. & W., 1868, pl. v, fig. 5 .....                                                    | 359-360 |
| <i>P. cyclonemoides</i> , n. s., M. & W., 1868, pl. v, fig. 4 .....                                            | 360-361 |
| <i>Subulites</i> (Conrad), Emmons, 1842 .....                                                                  | 361-362 |
| <i>S. (Polyphemopsis) brevis</i> , Winchell & Marcy, 1865, pl. v, fig. 6 .....                                 | 352-363 |
| Articulata .....                                                                                               | 363     |
| Crustacea .....                                                                                                | 363     |
| <i>Dalmanites</i> , Auct. .....                                                                                | 363     |
| <i>D. danuv</i> , M. & W., 1865, pl. vi, figs. 1 <i>a-f</i> .....                                              | 363-367 |

## FOSSILS OF THE LOWER HELDERBERG GROUP.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| Radiata .....                                                         | 368     |
| Zoophyta .....                                                        | 368     |
| <i>Striatopora</i> , Hall, 1852 .....                                 | 368-369 |
| <i>S. missouriensis</i> , n. s., M. & W., 1868, pl. vii, fig. 4 ..... | 369-370 |
| Echinodermata .....                                                   | 370     |

|                                                                                                                       | Page.   |
|-----------------------------------------------------------------------------------------------------------------------|---------|
| <i>Edriocrinus</i> , Hall, 1859.....                                                                                  | 370     |
| <i>E. pocilliformis</i> , Hall, 1859, pl. vii, figs. 5 <i>a</i> , <i>b</i> .....                                      | 370-371 |
| Mollusca.....                                                                                                         | 371     |
| Brachiopoda.....                                                                                                      | 371     |
| <i>Orthis</i> , Dalman, 1828.....                                                                                     | 371     |
| <i>O. hybrida</i> , Sowerby ? 1839, pl. vii, figs. 7 <i>a-d</i> .....                                                 | 371-372 |
| <i>O. subearinata</i> , Hall, 1857, pl. vii, figs. 6 <i>a-d</i> .....                                                 | 373-374 |
| <i>Strophomena</i> , Rafinesque, 1820.....                                                                            | 374     |
| <i>S. (Strophodonta) cavumbona</i> , Hall ? 1857, pl. vii, fig. 10 <i>a</i> , <i>b</i> .....                          | 374-376 |
| <i>Merista</i> , Suess, 1851.....                                                                                     | 376     |
| <i>M. laevis</i> , Vanuxem ? sp., 1843, pl. vii, figs. 8 <i>a</i> , <i>c</i> .....                                    | 376-377 |
| <i>Zygospira</i> , Hall, 1862.....                                                                                    | 377-380 |
| <i>Z. subconcava</i> , n. s., M. & W., 1868, pl. vii, fig. 1 <i>a-d</i> .....                                         | 380-301 |
| <i>Trematospira</i> , Hall, 1859.....                                                                                 | 381     |
| <i>T. ? imbricata</i> , Hall, 1857, pl. vii, fig. 2 <i>a-e</i> .....                                                  | 381-382 |
| <i>Cyrtina</i> , Davidson, 1858.....                                                                                  | 383     |
| <i>C. dalmani</i> , Hall, sp., 1857, pl. vii, figs. 3 <i>a</i> , <i>b</i> .....                                       | 383     |
| <i>Spirifer</i> , Sowerby, 1815.....                                                                                  | 384     |
| Subgenus <i>Trigonotreta</i> , Koenig, 1825.....                                                                      | 384     |
| <i>S. perlamellosus</i> , Hall, 1857, pl. vii, figs. 9 <i>a</i> , <i>b</i> .....                                      | 384     |
| Gastropoda.....                                                                                                       | 384     |
| <i>Platyceras</i> , Conrad, 1840.....                                                                                 | 384-387 |
| <i>P. subundatum</i> , n. s., M. & W., 1868, pl. vii, figs. 13 <i>a</i> , <i>b</i> , and 14 <i>a</i> , <i>b</i> ..... | 387-388 |
| <i>P. spirale</i> , Hall, 1859, pl. vii, fig. 12 <i>a-c</i> .....                                                     | 389     |
| <i>P. (Orthonychia) pyramidatum</i> , Hall ? 1859, pl. vii, fig. 11.....                                              | 389-390 |
| Articulata.....                                                                                                       | 390     |
| Crustacea.....                                                                                                        | 390     |
| <i>Acidaspis</i> , Murchison, 1839.....                                                                               | 390     |
| <i>Acidaspis hamata</i> , Conrad, sp., 1841, pl. vii, fig. 15.....                                                    | 390-391 |
| <i>Dalmanites</i> , Auct.....                                                                                         | 391     |
| <i>D. tridentiferus</i> , Shumard, 1855, pl. vii, fig. 16.....                                                        | 391-392 |

DEVONIAN SPECIES.

FOSSILS OF THE ORISKANY GROUP.

|                                                                                                                   |         |
|-------------------------------------------------------------------------------------------------------------------|---------|
| Mollusca.....                                                                                                     | 393     |
| Brachiopoda.....                                                                                                  | 393     |
| <i>Leptæna</i> , Dalman, 1827.....                                                                                | 393     |
| <i>L. ? nucleata</i> , Hall, 1859, pl. viii, figs. 8 <i>a-d</i> .....                                             | 393-394 |
| <i>Rhynchonella</i> , Fischer, 1809.....                                                                          | 394     |
| <i>R. speciosa</i> , Hall, 1857, pl. viii, fig. 9.....                                                            | 394-395 |
| <i>Eatonia</i> , Hall, 1857.....                                                                                  | 395     |
| <i>E. peculiaris</i> , Conrad, sp., 1841, pl. viii, figs. 2 <i>a-d</i> .....                                      | 395-396 |
| <i>Leptæna</i> , Hall, 1857.....                                                                                  | 397     |
| <i>L. flabellites</i> , Conrad, sp., 1841, pl. viii, figs. 3 <i>a-c</i> .....                                     | 397-398 |
| <i>Spirifer</i> , Sowerby, 1815.....                                                                              | 398     |
| Subgenus <i>Trigonotreta</i> , Koenig, 1825.....                                                                  | 398     |
| <i>S. engelmanni</i> , n. s., M. & W., 1868, pl. viii, figs. 5 <i>a-d</i> .....                                   | 398-399 |
| <i>S. hemicyclus</i> , n. s., M. & W., 1868, pl. viii, figs. 6 <i>a-d</i> , and 7 <i>a</i> , <i>b</i> ?.....      | 399-401 |
| <i>Rensselaeria</i> , Hall, 1859.....                                                                             | 401     |
| <i>R. condoni</i> , McChesney, 1861, pl. viii, figs. 4 <i>a</i> , <i>b</i> .....                                  | 401-402 |
| <i>Stricklandinia</i> , Billings, 1863.....                                                                       | 402     |
| <i>S. elongata</i> var. <i>curta</i> , M. & W., 1868, pl. viii, figs. 1 <i>a-c</i> , and pl. ix, fig. 5 ?.....    | 402-404 |
| Gastropoda.....                                                                                                   | 404     |
| <i>Strophostylus</i> , Hall, 1857.....                                                                            | 404     |
| <i>S. cancellatus</i> , n. s., M. & W., 1868, p. 404, figs. and pl. viii, fig. 12 (11 <i>a</i> , <i>b</i> ?)..... | 404-405 |
| <i>Platyceras</i> , Conrad, 1840.....                                                                             | 406     |
| <i>P. spirale</i> , Hall ? 1859, pl. viii, fig. 10.....                                                           | 406     |

FOSSILS OF THE CORNIFEROUS GROUP.

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Radiata.....                                                              | 407     |
| Zoophyta.....                                                             | 407     |
| <i>Pleurodictyum</i> , Goldfuss, 1829.....                                | 407     |
| <i>P. problematicum</i> , Goldf. ? 1859, pl. ix, figs. 1 <i>a-c</i> ..... | 407-409 |
| <i>Baryphyllum</i> , E. & H., 1850.....                                   | 409     |

|                                                                                              | Page.   |
|----------------------------------------------------------------------------------------------|---------|
| <i>B. ?? arenarium</i> , n. s., M. & W., 1868, pl. ix, figs. 2 <i>a</i> , <i>b</i> .....     | 409-410 |
| <i>Zaphrentis</i> , R. & C., 1820 .....                                                      | 410     |
| <i>Zaphrentis</i> , sp. undt., pl. ix, fig., 3 <i>a</i> , <i>b</i> .....                     | 410     |
| <i>Mollusca</i> .....                                                                        | 410     |
| <i>Brachiopoda</i> .....                                                                     | 410     |
| <i>Orthis</i> , Dalman, 1828 .....                                                           | 410     |
| <i>Orthis</i> , undt., pl. ix, fig. 4 .....                                                  | 410-411 |
| <i>Strophomena</i> , Raf., 1820 .....                                                        | 411     |
| <i>S. (Strophodonta)</i> , sp. ? pl. ix, figs. 9 (and 7 <i>a</i> ?) .....                    | 411-412 |
| <i>S. (Strophodonta)</i> , sp. ? pl. vi, figs. 6 <i>a</i> , <i>b</i> .....                   | 412     |
| <i>Productus</i> , Sowerby, 1814 .....                                                       | 412     |
| <i>P. exanthematus</i> , Hall? 1857, pl. x, figs. 3 <i>a-c</i> .....                         | 412-413 |
| <i>Spirifer</i> , Sowerby, 1815 .....                                                        | 414     |
| Subgenus <i>Trigonotreta</i> , König, 1825 .....                                             | 414     |
| <i>S. perextensus</i> , n. s., M. & W., 1868, pl. x, figs. 1 <i>a-d</i> .....                | 414-415 |
| <i>S. paradoxus</i> , Schlot. ? sp., 1813, pl. x, fig. 2 .....                               | 415-416 |
| <i>Articulata</i> .....                                                                      | 416     |
| <i>Crustacea</i> .....                                                                       | 416     |
| <i>Dalmanites</i> , Anct .....                                                               | 416     |
| Subgenus <i>Odontocephalus</i> , Conrad, 1840 .....                                          | 416     |
| <i>Odontocephalus</i> ——— ? pl. ix, fig. 10 .....                                            | 416-417 |
| <i>Dalmanites (Odontocephalus) ægeria</i> , Hall? sp., 1861, pl. x, figs. 4 <i>a-c</i> ..... | 417-418 |

## FOSSILS OF THE HAMILTON GROUP.

|                                                                                              |         |
|----------------------------------------------------------------------------------------------|---------|
| <i>Protozoa</i> .....                                                                        | 419     |
| <i>Spongie</i> .....                                                                         | 419     |
| <i>Astræospongia</i> , Römer, 1854 .....                                                     | 419     |
| <i>A. hamiltonensis</i> , M. & W., 1866, pl. x, fig. 6 .....                                 | 419     |
| <i>Radiata</i> .....                                                                         | 420     |
| <i>Zoophyta</i> .....                                                                        | 420     |
| <i>Microcyclus</i> ,* n. g., M. & W., 1866 .....                                             | 420     |
| <i>M. discus</i> , n. s., M. & W., 1868, pl. xi, figs. 7 <i>a</i> , <i>b</i> .....           | 420-421 |
| <i>Echinodermata</i> .....                                                                   | 421     |
| <i>Taxocrinus</i> , Phillips, 1843 .....                                                     | 421     |
| <i>T. gracilis</i> , M. & W., 1865, page 421, fig. —, and pl. xiii, fig. 3 .....             | 421-423 |
| <i>Mollusca</i> .....                                                                        | 423     |
| <i>Brachiopoda</i> .....                                                                     | 423     |
| <i>Orthis</i> , Dalman, 1827 .....                                                           | 423     |
| <i>O. mcfarlandi</i> , Meek, 1868, pl. xiii, figs. 10 <i>a-d</i> .....                       | 423-424 |
| <i>O. iowensis</i> var. <i>furnarius</i> , Hall, pl. xiii, figs. 9 <i>a</i> , <i>b</i> ..... | 424-425 |
| <i>Strophomena</i> , Raf., 1820 .....                                                        | 426     |
| <i>S. rhomboidalis</i> , Wahlenb., sp., 1821, pl. x, fig. 7 <i>a</i> , <i>b</i> .....        | 426-427 |
| <i>Tropidoleptus</i> , Hall, 1857 .....                                                      | 427     |
| <i>T. carinatus</i> , Conrad, sp., 1839, pl. xiii, figs. 2 <i>a-c</i> .....                  | 427-428 |
| <i>Pentamerus</i> , Sowerby, 1813 .....                                                      | 428     |
| <i>P. comis</i> , Owen? sp., 1855, pl. xiii, figs. 6 <i>a-c</i> .....                        | 428-429 |
| <i>P. subglobosus</i> , n. s., M. & W., 1868, pl. xiii, figs. 5 <i>a-c</i> .....             | 429-430 |
| <i>Atrypa</i> , Dalman, 1827 .....                                                           | 430     |
| <i>A. aspera</i> , Schlotheim, sp., 1813, pl. xiii, figs. 7 <i>a-d</i> .....                 | 430-431 |
| <i>A. reticularis</i> , Linnaeus, sp. 1767, pl. xiii, fig. 11 .....                          | 432-433 |
| <i>Spirifer</i> , Sowerby, 1815 .....                                                        | 433     |
| Subgenus <i>Trigonotreta</i> , König, 1825 .....                                             | 433     |
| <i>S. fornacula</i> , Hall, 1857, pl. xiii, figs. 8 <i>a-c</i> .....                         | 433-434 |
| <i>S. subundiferus</i> , n. s., M. & W., 1868, pl. x, fig. 5 <i>a-e</i> .....                | 434-435 |
| <i>Cyrtina</i> , Davidson, 1858 .....                                                        | 436     |
| <i>C. triquetra</i> , Hall, sp. 1858, pl. xiii, fig. 4 <i>a-d</i> .....                      | 436     |
| <i>Lingula</i> , Brugniere, 1792 .....                                                       | 437     |
| <i>L. subspatulata</i> , n. s., M. & W., 1868, pl. xiii, fig. 1 .....                        | 437     |
| <i>Lamellibranchiata</i> .....                                                               | 437     |
| <i>Pterinea</i> , Goldf., 1832 .....                                                         | 437     |
| <i>P. ? subpyræca</i> , M. & W., 1866, pl. xi, fig. 5 .....                                  | 437-438 |
| <i>Modiolopsis</i> , Hall, 1847 .....                                                        | 438     |
| <i>M. ? perorata</i> , M. & W., 1865, pl. xi, fig. 2 .....                                   | 438-439 |

\* μικρος, small; κυκλος, a circle.

|                                                                                                       | Page.   |
|-------------------------------------------------------------------------------------------------------|---------|
| <i>Grammysia</i> , de Verneuil, 1847.....                                                             | 439     |
| <i>G. ? rhomboidalis</i> , M. & W., 1865, pl. xi, figs. 5 <i>a</i> , <i>b</i> .....                   | 439-441 |
| <i>Gasteropoda</i> .....                                                                              | 441     |
| <i>Platyceras</i> , Conrad, 1840.....                                                                 | 441     |
| <i>P. ventricosum</i> , Conrad, 1840, pl. xi, figs. 4 <i>a</i> , <i>b</i> .....                       | 441-442 |
| <i>Isonema</i> ,* M. & W., 1865.....                                                                  | 442-443 |
| <i>I. depressa</i> , M. & W., 1865, p. 443, figs. A, B, and pl. xi, figs. 6 <i>a</i> , <i>b</i> ..... | 443     |
| <i>Cephalopoda</i> .....                                                                              | 444     |
| <i>Gomphoceras</i> , Sowerby, 1839.....                                                               | 444     |
| <i>G. turbiniforme</i> , M. & W., 1866, pl. xii, figs. 2 <i>a</i> , <i>b</i> .....                    | 444     |
| <i>Cyrtoceras</i> , Goldf. 1832.....                                                                  | 445     |
| <i>C. sacculum</i> , M. & W., 1866, pl. xii, figs. 3 <i>a-c</i> .....                                 | 445-446 |
| <i>Gyroceras</i> , de Koninek, 1844.....                                                              | 446     |
| <i>G. constrictum</i> , n. s., M. & W., 1866, pl. xii, figs. 1 <i>a</i> , <i>b</i> .....              | 446-447 |
| <i>Articulata</i> .....                                                                               | 447     |
| <i>Crustacea</i> .....                                                                                | 447     |
| <i>Phacops</i> , Emmerich, 1839.....                                                                  | 447     |
| <i>P. rana</i> , Green, sp., 1832, pl. xi, figs. 1 <i>a-c</i> .....                                   | 447-449 |

CARBONIFEROUS SPECIES.

FOSSILS OF THE KINDERHOOK GROUP.

|                                                                                        |         |
|----------------------------------------------------------------------------------------|---------|
| <i>Mollusca</i> .....                                                                  | 450     |
| <i>Brachiopoda</i> .....                                                               | 450     |
| <i>Rhynchonella</i> , Fisher, 1809.....                                                | 450     |
| <i>R. missouriensis</i> , Shumard, 1855, pl. xiv, figs. 7 <i>a-d</i> .....             | 450-452 |
| <i>Lamellibranchiata</i> .....                                                         | 453     |
| <i>Pernopecten</i> , Winchell, 1865.....                                               | 453     |
| <i>P. shumardianus</i> , Winchell, 1865, pl. xiv, figs. 6 <i>a</i> , <i>b</i> .....    | 453-455 |
| <i>Pterinea</i> , Goldf., 1832.....                                                    | 456     |
| <i>P. undulata</i> , n. s., M. & W., 1868, pl. xiv, fig. 5.....                        | 456     |
| <i>Gasteropoda</i> .....                                                               | 457     |
| <i>Platyceras</i> , Conrad, 1840.....                                                  | 457     |
| <i>P. (Orthonychia?) subplicatum</i> , M. & W., 1866, pl. 14, figs. 4 <i>a-c</i> ..... | 457     |
| <i>P. haliotoides</i> , M. & W., 1866, pl. xiv, figs. 3 <i>a</i> , <i>b</i> .....      | 458     |
| <i>Porcellia</i> , Leveille, 1835.....                                                 | 458     |
| <i>P. nodosa</i> , Hall, 1860, pl. xiv, figs. 1 <i>a</i> , <i>b</i> .....              | 458-459 |
| <i>Gyroceras</i> , de Koninek, 1844.....                                               | 459     |
| <i>G. rockfordensis</i> , M. & W., 1866, pl. xiv, fig. 2 <i>a</i> .....                | 459-460 |
| <i>Articulata</i> .....                                                                | 460     |
| <i>Crustacea</i> .....                                                                 | 460     |
| <i>Proetus</i> , Steininger, 1830?.....                                                | 460     |
| <i>P. ellipticus</i> , M. & W., 1865, pl. xiv, fig. 8.....                             | 460-462 |

FOSSILS OF THE BURLINGTON GROUP.

|                                                                                                    |         |
|----------------------------------------------------------------------------------------------------|---------|
| <i>Radiata</i> .....                                                                               | 463     |
| <i>Echinodermata</i> .....                                                                         | 463     |
| <i>Belemnocrinus</i> , White, 1862.....                                                            | 463     |
| <i>B. whitii</i> , M. & W., 1866, p. 463, fig. —, and pl. xviii, fig. 4 <i>a-c</i> .....           | 463-464 |
| <i>Catillocrinus</i> , Troost, 1850.....                                                           | 465     |
| <i>C. wachsmuthi</i> , M. & W., 1866, pl. xviii, fig. 5.....                                       | 465-466 |
| <i>Platycrinus</i> , Miller, 1821.....                                                             | 466     |
| <i>P. scobina</i> , M. & W., 1861, p. 466, fig. —, and pl. xvi, fig. 9.....                        | 466-467 |
| <i>P. planus</i> , Owen & Shumard? 1850, pl. xvi, fig. 6.....                                      | 467-468 |
| <i>P. (Pleurocrinus) asper</i> , M. & W., 1861, p. 468, fig. —, and pl. xviii, fig. 9.....         | 468-469 |
| <i>Actinocrinus</i> , Miller, 1821.....                                                            | 470     |
| <i>A. (Saccocrinus?) amplus</i> , M. & W., 1861, p. 470, fig. —, and pl. xvi, fig. 2.....          | 470-472 |
| <i>A. (Batocrinus) pistillus</i> , M. & W., 1865, pl. xvi, figs. 4 <i>a</i> , <i>b</i> .....       | 472-474 |
| <i>Steganoocrinus</i> , M. & W., 1866.....                                                         | 474     |
| <i>S. pentagonus</i> , Hall, sp., 1858, pl. xvi, fig. 8.....                                       | 474-476 |
| <i>Rhodocrinus</i> , Miller, 1821.....                                                             | 476     |
| <i>R. nanus</i> , M. & W., 1866, p. 476, figs. —, and pl. xviii, figs. 2 <i>a</i> , <i>b</i> ..... | 476-478 |
| <i>Bursacrinus</i> ,† M. & W., 1861.....                                                           | 478     |
| <i>B. wachsmuthi</i> , M. & W., 1861, pl. xvii, fig. 6, and p. 479, fig. —.....                    | 479-480 |

\* ισος, equal; νημα, a thread.

† βυρα, a purse; λεινον, a lily.



|                                                                                                                       | Page.   |
|-----------------------------------------------------------------------------------------------------------------------|---------|
| <i>Cyathocrinus</i> , Miller, 1821 .....                                                                              | 481     |
| <i>C. enormis</i> , M. & W., 1865, pl. xvi, figs. 3 <i>a</i> , <i>b</i> .....                                         | 481-482 |
| <i>C. wachsmuthi</i> , M. & W., 1861, p. 482, fig. —, and pl. xvi, fig. 5 .....                                       | 482-484 |
| <i>Poteriocrinus</i> , Miller, 1821 .....                                                                             | 484     |
| <i>P. tenuibrachiatus</i> , M. & W., 1861, p. 484, fig. —, and pl. xvi, fig. 1 .....                                  | 484-485 |
| <i>P. subimpressus</i> , M. & W., 1861, p. 485, fig. —, and pl. xviii, figs. 1 <i>a</i> , <i>b</i> .....              | 485-486 |
| <i>P. carinatus</i> , M. & W., 1861, p. 486, fig. —, and pl. xvii, fig. 1 .....                                       | 486-488 |
| Subgenus <i>Scaphiocrinus</i> , Hall, 1858 .....                                                                      | 488     |
| <i>S. wachsmuthi</i> , M. & W., 1861, p. 488, fig. —, and pl. xvi, figs. 7 <i>a</i> , <i>b</i> .....                  | 488-489 |
| <i>Poteriocrinus (Scaphiocrinus) tenuidactylus</i> , M. & W., 1865, p. 490, fig. —, and pl. xviii, fig. 10 .....      | 490-491 |
| <i>Onychocrinus</i> , Lyon & Casseday, 1859 .....                                                                     | 492     |
| <i>O. diversus</i> , M. & W., 1866, page 492, fig. —, and pl. xvii, figs. 5 <i>a</i> , <i>b</i> .....                 | 492-495 |
| <i>Taxocrinus</i> , Phillips, 1843 .....                                                                              | 495     |
| <i>Forbesiocrinus</i> , de Kon. & Le Hon, 1854 .....                                                                  | 495     |
| <i>F. agassizi</i> , var. <i>giganteus</i> , M. & W., 1861, pl. xviii, fig. 3 .....                                   | 495     |
| <i>Granatocrinus</i> (Troost), Hall, 1852 .....                                                                       | 496     |
| <i>G. projectus</i> , M. & W., sp., 1861, page 496, fig. —, and pl. xviii, fig. 7 .....                               | 496     |
| <i>G. norwoodi</i> , O. & S. ? sp., 1860, pl. xviii, fig. 8 .....                                                     | 496-497 |
| <i>G. shumardi</i> , M. & W., 1866, page 498, fig. —, and pl. xviii, figs. 6 <i>a</i> , ? <i>b</i> .....              | 498-499 |
| <i>Asteroides</i> .....                                                                                               | 499     |
| <i>Schænaster</i> , M. & W., 1860 .....                                                                               | 499     |
| <i>S. wachsmuthi</i> , M. & W., 1866, pl. xvii, fig. 4 .....                                                          | 499-500 |
| <i>Mollusca</i> .....                                                                                                 | 501     |
| <i>Polyzoa</i> .....                                                                                                  | 501     |
| <i>Eractinopora</i> , M. & W., 1865 .....                                                                             | 501     |
| <i>E. radiata</i> , M. & W., 1865, page 502, fig. —, and pl. xvii, figs. 2 <i>a</i> , <i>b</i> .....                  | 502     |
| <i>E. sexradiata</i> , n. s., M. & W., 1868, pl. xvii, fig. 3 .....                                                   | 502     |
| <i>E. grandis</i> , n. s., M. & W., 1868, p. 503, fig. —, and pl. xv, figs. 2 <i>a</i> , <i>b</i> .....               | 503     |
| <i>Fenestella</i> , Lonsdale, 1839 .....                                                                              | 504     |
| Subgenus <i>Lyropora</i> , Hall, 1856 .....                                                                           | 504     |
| <i>Fenestella (Lyropora) retrorsa</i> , n. s., M. & W., 1868, pl. xv, fig. 1 .....                                    | 504     |
| <i>Brachiopoda</i> .....                                                                                              | 505     |
| <i>Chonetes</i> , Fischer, 1837 .....                                                                                 | 505     |
| <i>C. illinoisensis</i> , Worthen, 1860, pl. xv, figs. 8 <i>a</i> , <i>b</i> .....                                    | 505-506 |
| <i>Gasteropoda</i> .....                                                                                              | 506     |
| <i>Metopoma</i> , Phillips, 1836 .....                                                                                | 506     |
| <i>M. ? umbella</i> , M. & W., 1866, pl. xv, figs. 6 <i>a</i> , <i>b</i> , <i>c</i> ; and 7 .....                     | 506-507 |
| <i>Platyceras</i> , Conrad, 1840 .....                                                                                | 508     |
| <i>P. [?] reversum</i> , Hall, 1860, p. 508, fig. —, and pl. xv, figs. 4 <i>a</i> , <i>b</i> .....                    | 508-509 |
| <i>P. biserialis</i> , Hall, 1860, pl. xv, figs. 3 <i>a</i> , <i>b</i> .....                                          | 509     |
| <i>P. (Orthonychia) quincyense</i> , McChesney, 1861, pl. xv, figs. 5 <i>a</i> , <i>b</i> .....                       | 510     |
| FOSSILS OF THE KEOKUK GROUP.                                                                                          |         |
| <i>Radiata</i> .....                                                                                                  | 511     |
| <i>Echinodermata</i> .....                                                                                            | 511     |
| <i>Platycrinus</i> , Miller, 1821 .....                                                                               | 511     |
| <i>P. hemisphericus</i> , M. & W., 1865, p. 511, fig. —, and pl. xx, figs. 2 <i>a</i> , <i>b</i> .....                | 511-513 |
| <i>P. niotensis</i> , M. & W., 1865, p. 513, fig. —, and pl. xx, fig. 3 .....                                         | 513-514 |
| <i>Poteriocrinus</i> , Miller, 1821 .....                                                                             | 515     |
| <i>P. indianensis</i> , M. & W., 1865, pl. xx, fig. 4; and p. 515, fig. — .....                                       | 515-516 |
| <i>Cyathocrinus</i> , Miller, 1821 .....                                                                              | 517     |
| <i>C. farleyi</i> , M. & W., 1866, p. 517, fig. —, and pl. xx, figs. 1 <i>a</i> , <i>b</i> , and 6 <i>c</i> .....     | 517-518 |
| <i>C. ? sp. undt.</i> , pl. xx, figs. 5 <i>a-c</i> .....                                                              | 518-519 |
| <i>C. quinquelobus</i> , M. & W., 1865, p. 519, fig. —; and pl. xx, figs. 6 <i>a</i> , <i>b</i> (not <i>c</i> ) ..... | 519-520 |
| <i>C. arboreus</i> , M. & W., 1865, p. 520, fig. — .....                                                              | 520-522 |
| <i>Echinoida</i> .....                                                                                                | 522     |
| <i>Perischoechinidae</i> .....                                                                                        | 522     |
| <i>Lepidosthes</i> ,* n. g., M. & W., 1868 .....                                                                      | 522-524 |
| <i>L. coreyi</i> , n. s., M. & W., 1868, p. 524, fig. A .....                                                         | 524-525 |
| <i>Melonites multipora</i> , p. 524, fig. B .....                                                                     | 524     |
| <i>Oligoporus danae</i> , p. 524, fig. C .....                                                                        | 524     |

\* λεπτις, a scale; εσθης, a garment.

|                                                                                                       | Page.   |
|-------------------------------------------------------------------------------------------------------|---------|
| <i>Asteroidæa</i> .....                                                                               | 526     |
| <i>Onychaster</i> ,* n. g., M. & W., 1868.....                                                        | 526     |
| <i>O. flexilis</i> , n. s., M. & W., 1868, p. 526, figs. A, B, C, D.....                              | 526-528 |
| <i>Mollusca</i> .....                                                                                 | 528     |
| <i>Brachiopoda</i> .....                                                                              | 528     |
| <i>Productus</i> , Sowerby, 1814 .....                                                                | 528     |
| <i>P. magnus</i> , M. & W., 1861, pl. xx, figs. 7 <i>a-c</i> .....                                    | 528-530 |
| <i>Spirifer</i> , Sowerby, 1815 .....                                                                 | 530     |
| <i>S. propinquus</i> , Hall, 1858, pl. xix, figs. 8 <i>a-c</i> .....                                  | 530-532 |
| <i>Lamellibranchiata</i> .....                                                                        | 532     |
| <i>Aviculopecten</i> , McCoy, 1851 .....                                                              | 532     |
| <i>A. indianensis</i> , M. & W., 1866, pl. xix, figs. 6 <i>a, b</i> .....                             | 532-534 |
| <i>Anthracoptera</i> , Salter, 1862 .....                                                             | 534     |
| <i>A. ? fragilis</i> , M. & W., 1866, pl. xix, fig. 4.....                                            | 534-535 |
| <i>Pleurophorus</i> , King, 1844 .....                                                                | 535     |
| <i>P. costatiformis</i> , M. & W., 1865, p. 535, fig. —, and pl. xix, fig. 8?.....                    | 535-536 |
| <i>Lithophaga</i> , Lamarec, 1812 .....                                                               | 536     |
| <i>L. linguulis</i> , Phillips?, sp., 1836, pl. xix, figs. 1, 2 .....                                 | 536-537 |
| <i>Sedgwickia</i> , McCoy, 1844 .....                                                                 | 537     |
| <i>S. (Sanguinolites) subarcuata</i> , M. & W., 1865, pl. xix, fig. 3 <i>b</i> (not 3 <i>a</i> )..... | 537-538 |
| <i>Allorisma</i> , King, 1844 .....                                                                   | 538     |
| <i>A. (Chænomya ?) hybrida</i> , M. & W., 1865, pl. xix, fig. 3 <i>a</i> (not 3 <i>b</i> ).....       | 538-539 |
| ARTICULATE FOSSILS OF THE COAL MEASURES.                                                              |         |
| <i>Crustacea</i> .....                                                                                | 540     |
| <i>Entomostraca</i> .....                                                                             | 540     |
| <i>Gnathostomata</i> .....                                                                            | 540     |
| <i>Phyllopoda</i> .....                                                                               | 540     |
| <i>Ceratiocaris</i> , McCoy, 1849 .....                                                               | 540     |
| <i>O. ? sinuatus</i> , M. & W., 1868, p. 540, fig. A.....                                             | 540-541 |
| <i>Leaia</i> , Jones, 1862 .....                                                                      | 541     |
| <i>L. tricarinata</i> , n. s. M. & W., 1868, woodcut, figs. B 1, 2, 3 (and C ?), p. 540 .....         | 541-543 |
| <i>Merostomata</i> .....                                                                              | 544     |
| <i>Eurypterida</i> .....                                                                              | 544     |
| <i>Eurypterus</i> , De Kay, 1825 .....                                                                | 544     |
| <i>E. (Anthracoetes) mazonensis</i> , M. & W., 1868, figs.—, p. 544 .....                             | 544     |
| <i>Ziphosura</i> .....                                                                                | 547     |
| <i>Euproops</i> , Meek, 1867 .....                                                                    | 547     |
| <i>E. dane</i> , M. & W., 1865, p. 547, figs. A, B .....                                              | 547-549 |
| <i>Tetradecapoda</i> .....                                                                            | 549     |
| <i>Isopoda</i> .....                                                                                  | 549     |
| <i>Acanthotelson</i> , M. & W., 1860 .....                                                            | 549     |
| <i>A. stimpsoni</i> , M. & W., 1860, p. 549, figs. A, B.....                                          | 549-550 |
| <i>A. eveni</i> , M. & W., 1868, p. 551, figs. A, B, C, D.....                                        | 551     |
| <i>Decapoda</i> .....                                                                                 | 552     |
| <i>Macrura</i> .....                                                                                  | 552     |
| <i>Palæocaris</i> , M. & W., 1865 .....                                                               | 552     |
| <i>P. typus</i> , M. & W., 1865, p. 552, figs. A, B .....                                             | 552-553 |
| <i>Gamponix jimbriatus</i> , p. 552, figs. C, D .....                                                 | 552     |
| <i>Anthrapalæmon</i> , Salter, 1861 .....                                                             | 554     |
| <i>A. gracilis</i> , M. & W., 1865, p. 554, figs. A, B.....                                           | 554-555 |
| <i>Myriapoda</i> .....                                                                                | 556     |
| <i>Euphoberia</i> , M. & W., 1865 .....                                                               | 556     |
| <i>E. armigera</i> , M. & W., 1865, p. 556, figs. A, B, C, D.....                                     | 556-558 |
| <i>E. ? major</i> , M. & W., 1868, p. 558, fig. —.....                                                | 558-559 |
| <i>Arachnida</i> .....                                                                                | 560     |
| <i>Pulmonaria</i> .....                                                                               | 560     |
| <i>Eoscorpius</i> , M. & W., 1868 .....                                                               | 560     |
| <i>E. carbonarius</i> , M. & W., 1868, p. 560, figs. <i>a, c, d, m, p</i> .....                       | 560-562 |
| <i>Mazonia</i> ,† n. g. M. & W., 1868 .....                                                           | 563     |
| <i>M. woodiana</i> , M. & W., 1868, p. 563, figs. A, B, C, D .....                                    | 563-565 |
| Note on the genus <i>Palæocampa</i> .....                                                             | 565     |

\*ονυξ, a claw; αστηρ, a star.

†Mazon, name of stream.

MEEK, F. B. Remarks on the geology of the valley of Mackenzie River, with figures and descriptions of fossils from that region, in the Museum of the Smithsonian Institution, chiefly collected by the late Robert Kennicott, Esq. <Trans. Chicago Acad. of Sci., vol. i, pp. 61-114, plates xi, xv. 1868. Chicago, 1867-1869.

## Devonian.

## CORALS.

*Cyathophyllidae.*

Page.

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| <i>Cyathophyllum</i> , Goldfuss, 1826.....                           | 79    |
| <i>C. articum</i> , n. s., Meek, 1868, pl. xi, fig. 8.....           | 79-80 |
| <i>Cysteophyllum</i> , Lonsdale, 1839.....                           | 80    |
| <i>C. americanum</i> var. <i>articum</i> , Meek, pl. xi, fig. 6..... | 80-81 |
| <i>Aulophyllum</i> , Edwards & Haime, 1850.....                      | 81    |
| <i>A. ? richardsoni</i> , n. s., Meek, 1868, pl. xi, fig. 3.....     | 81-82 |
| <i>Zaphrentis</i> , Rafinesque, 1820.....                            | 82    |
| <i>Z. recta</i> , n. s., Meek, 1868, pl. xi, fig. 1.....             | 82    |
| <i>Z. mefarlanei</i> , n. s., Meek, 1868, pl. xi, fig. 2.....        | 83    |
| <i>Smithia</i> , Edwards & Haime, 1851.....                          | 83    |
| <i>S. verrilli</i> , n. s., Meek, 1868, pl. xi, fig. 7.....          | 83-84 |
| <i>Combophyllum</i> , Edwards & Haime, 1858.....                     | 84    |
| <i>C. multiradiatum</i> , n. s., Meek, 1868, pl. xi, fig. 4.....     | 84-85 |

*Fungidae.*

|                                                           |    |
|-----------------------------------------------------------|----|
| <i>Paleocyclus</i> , Edwards & Haime, 1849.....           | 85 |
| <i>P. kirbyi</i> , n. s., Meek, 1868, pl. xi, fig. 5..... | 85 |

*Favositidae.*

|                                                             |       |
|-------------------------------------------------------------|-------|
| <i>Favosites</i> , Lamarek, 1816.....                       | 86    |
| <i>F. polymorpha</i> , Goldfuss, sp., pl. xi, fig. 10.....  | 86    |
| <i>Alveolites</i> , Lamarek, 1801.....                      | 86    |
| <i>A. vallorum</i> , n. s., Meek, 1868, pl. xi, fig. 9..... | 86-87 |

*Brachiopoda.**Lingulidae.*

|                                                             |    |
|-------------------------------------------------------------|----|
| <i>Lingula</i> , Bruguière.....                             | 87 |
| <i>L. minuta</i> , n. s., Meek, 1868, pl. xiii, fig. 1..... | 87 |

*Strophomenidae.*

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| <i>Strophomena</i> , Rafinesque.....                                    | 87    |
| <i>S. (Strophodonta) demissa</i> , Conrad, 1842, pl. xiii, fig. 6.....  | 87-88 |
| <i>S. (Strophodonta) subdemissa</i> , Hall, 1856, pl. xiii, fig. 7..... | 88    |
| <i>Orthis</i> , Dalman, 1828.....                                       | 88    |
| <i>O. mefarlanei</i> , n. s., Meek, 1868, pl. xii, fig. 1.....          | 88-90 |
| <i>O. iowensis</i> , Hall? 1858, pl. xii, fig. 2.....                   | 90-91 |

*Productidae.*

|                                                          |       |
|----------------------------------------------------------|-------|
| <i>Productus</i> , Sowerby.....                          | 91    |
| <i>P. dissimilis</i> , Hall? 1858, pl. xiii, fig. 3..... | 91    |
| <i>Productus</i> ———? Meek, 1869, pl. xiii, fig. 4.....  | 91-92 |
| <i>Productus</i> ———? Meek, 1869, pl. xiii, fig. 5.....  | 92    |
| <i>Chonetes</i> , Fischer.....                           | 93    |
| <i>C. pusilla</i> , Hall? 1857, pl. xiii, fig. 2.....    | 93    |

*Rhynchonellidae.*

|                                                                  |       |
|------------------------------------------------------------------|-------|
| <i>Rhynchonella</i> , Fischer, 1809.....                         | 93    |
| <i>R. castanea</i> , n. s., Meek, 1868, pl. xiii, fig. 9.....    | 93-95 |
| <i>Rhynchonella</i> ———? Meek, 1869, pl. xv, fig. 4.....         | 95    |
| <i>Pentamerus</i> , Sowerby, 1812.....                           | 95    |
| <i>P. borealis</i> , n. s., Meek, 1868, pl. xiii, fig. 11.....   | 95-96 |
| <i>Atrypa</i> , Dalman, 1827.....                                | 96    |
| <i>A. aspera</i> , Schlotheim, sp., 1820, pl. xiii, fig. 12..... | 96-97 |
| <i>A. reticularis</i> , Linn. sp., 1767, pl. xiii, fig. 13.....  | 97    |

*Spiriferidae.*

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| <i>Cyrtina</i> , Davidson, 1858.....                                            | 97      |
| <i>C. billingsi</i> , n. s., Meek, 1868, pl. xiv, fig. 6.....                   | 97-99   |
| <i>C. hamiltonensis</i> , Hall, 1857, pl. xiv, fig. 10, and figs. 5 and 7?..... | 99-100  |
| <i>C. panda</i> , n. s., Meek, 1868, pl. xiv, fig. 8.....                       | 100-101 |
| <i>Spirifer</i> , Sowerby, 1815.....                                            | 101     |
| <i>S. kennicotti</i> , n. s., Meek, 1868, pl. xiv, fig. 9.....                  | 101-102 |
| <i>S. compactus</i> , n. s., Meek, 1868, pl. xiv, fig. 11.....                  | 102-103 |

|                                                                                    | Page.   |
|------------------------------------------------------------------------------------|---------|
| Subgenus <i>Martinia</i> , McCoy, 1844.....                                        | 103     |
| <i>S. (Martinia) sublineatus</i> , n. s., Meek, 1868, pl. xiv, fig. 1 .....        | 103-104 |
| <i>S. (Martinia) richardsoni</i> , n. s., Meek, 1868, pl. xiv, fig. 2 .....        | 104-105 |
| <i>S. (Martinia) meristoides</i> , n. s., Meek, 1868, pl. xiv, fig. 3 .....        | 106-107 |
| <i>S. (Martinia) franklinii</i> , n. s., Meek, 1868, pl. xiv, fig. 12 .....        | 107-108 |
| <i>Rensselaeria</i> , Hall, 1859.....                                              | 108     |
| <i>R. levis</i> , n. s., M. & W., 1868, pl. xiii, fig. 8, and pl. xiv, fig. 4..... | 108-109 |
| <i>Gasteropoda</i> .                                                               |         |
| <i>Pleurotomariidæ</i> .                                                           |         |
| <i>Pleurotomaria</i> , DeFrance, 1826 .....                                        | 110     |
| <i>Pleurotomaria</i> ——— ? Meek, 1869, pl. xv, fig. 3.....                         | 110     |
| <i>Cephalopoda</i> .                                                               |         |
| <i>Nautilidæ</i> .                                                                 |         |
| <i>Gyroceras</i> , Koninck, 1844.....                                              | 110     |
| <i>G. logani</i> , n. s., Meek, 1868 .....                                         | 110-111 |

61.

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MEEK, F. B., and WORTHEN, A. H. Descriptions of new Crinoidea and Echinoidea from the Carboniferous rocks of the Western States, with a note on the Genus *Onychaster*. <Proc. Acad. Nat. Sci. Phila., vol. xxi, pp. 67-83. 1869. Philadelphia, 1869.

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|                                                                            | Page. |
|----------------------------------------------------------------------------|-------|
| <i>Synbathocrinus</i> , Phillips, 1836.....                                | 67    |
| <i>S. wachsmuthi</i> , M. & W., 1866.....                                  | 67-68 |
| <i>S. brevis</i> , n. s., M. & W., 1869.....                               | 68-69 |
| <i>Dichoerinus</i> , Münster, 1839 .....                                   | 69    |
| <i>D. lineatus</i> , n. s., M. & W., 1869 .....                            | 69    |
| <i>D. pisum</i> , n. s., M. & W., 1869 .....                               | 69-70 |
| <i>Erisocrinus</i> , M. & W., 1865 .....                                   | 70    |
| <i>E. antiquus</i> , n. s., M. & W., 1869.....                             | 71-72 |
| <i>E. whitei</i> , n. s., M. & W., 1869 .....                              | 72    |
| <i>Calceocrinus</i> , Hall, 1852 .....                                     | 72-73 |
| <i>C. ? bradleyi</i> , n. s., M. & W., 1869 .....                          | 73-74 |
| <i>C. ? wachsmuthi</i> , n. s., M. & W., 1869.....                         | 74-75 |
| <i>Gilbertocrinus</i> , Phillips.....                                      | 75    |
| Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday, 1859 .....          | 75    |
| <i>G. (Goniasteroidocrinus) tenuiradiatus</i> , n. s., M. & W., 1869 ..... | 75-76 |
| <i>G. (Goniasteroidocrinus) obovatus</i> , n. s., M. & W., 1869 .....      | 76-77 |
| <i>Lepidocentrus</i> , Müller (?), 1856.....                               | 77-78 |
| <i>L. irregularis</i> , n. s., M. & W., 1869.....                          | 78-79 |
| <i>Eocidaris ? squamosa</i> , n. s., M. & W., 1869 .....                   | 79-81 |
| <i>Palaechinus gracilis</i> , n. s., M. & W., 1869 .....                   | 82    |
| <i>Onychaster</i> , M. & W.....                                            | 82-83 |

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|                                                   | Page. |
|---------------------------------------------------|-------|
| <i>Granatocrinus</i> , Troost .....               | 88    |
| <i>G. melonoides</i> , n. s., M. & W., 1869 ..... | 88-89 |
| <i>G. pisum</i> , n. s., M. & W., 1869 .....      | 89-90 |
| <i>G. neglectus</i> , n. s., M. & W., 1869 .....  | 90-91 |
| <i>G. glaber</i> , n. s., M. & W., 1869 .....     | 91    |

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|                                                                               | Page. |
|-------------------------------------------------------------------------------|-------|
| <i>Foraminifera.</i>                                                          |       |
| <i>Receptaculites formosus</i> , n. s., M. & W., 1870 .....                   | 22-23 |
| <i>Echinodermata.</i>                                                         |       |
| <i>Baryocrinus spectabilis</i> , n. s., M. & W., 1870 .....                   | 23-24 |
| <i>Cyathocrinites? poterium</i> , n. s., M. & W., 1870 .....                  | 24-26 |
| <i>Poteriocrinites (Zeacrinus?) concinnus</i> , n. s., M. & W., 1870 .....    | 26-27 |
| <i>Scaphiocrinus depressus</i> , n. s., M. & W., 1870 .....                   | 27    |
| <i>Zeacrinus? armiger</i> , n. s., M. & W., 1870 .....                        | 27-28 |
| <i>Zeacrinus (Hydreionocrinus?) acanthoporus</i> , n. s., M. & W., 1870 ..... | 28-29 |
| <i>Euphyocrinus boydii</i> , n. s., M. & W., 1870 .....                       | 30    |
| <i>Homocrinus angustatus</i> , n. s., M. & W., 1870 .....                     | 30-31 |
| <i>Codonites</i> , n. g., M. & W., 1870 .....                                 | 31-32 |
| <i>C. gracilis</i> , n. s., M. & W., 1870 .....                               | 32-33 |
| <i>Pentremites burlingtonensis</i> , n. s., M. & W., 1870 .....               | 33-34 |
| <i>Oligoporus coreyi</i> , n. s., M. & W., 1870 .....                         | 34    |
| <i>Brachiopoda.</i>                                                           |       |
| <i>Chonetes? millepunctata</i> , n. s., M. & W., 1870 .....                   | 35-36 |
| <i>Spirifer fastigatus</i> , n. s., M. & W., 1870 .....                       | 36-37 |
| <i>Stricklandinia deformis</i> , n. s., M. & W., 1870 .....                   | 37-38 |
| <i>Lamellibranchiata.</i>                                                     |       |
| <i>Monotis? gregaria</i> , n. s., M. & W., 1870 .....                         | 38    |
| <i>Archeopecten spinuliferus</i> , n. s., M. & W., 1870 .....                 | 39    |
| <i>Carbonarea</i> , n. g., M. & W., 1870 .....                                | 39    |
| <i>C. gibbosa</i> , n. s., M. & W., 1870 .....                                | 40    |
| <i>Macrodon delicatus</i> , n. s., M. & W., 1870 .....                        | 40    |
| <i>Modiolopsis subnasuta</i> , n. s., M. & W., 1870 .....                     | 41    |
| <i>Schizotus amplus</i> , n. s., M. & W., 1870 .....                          | 41-42 |
| <i>Seacrinus (Prisonaia) perlegans</i> , n. s., M. & W., 1870 .....           | 42-43 |
| <i>Clinopistha</i> , n. g., M. & W., 1870 .....                               | 43-44 |
| <i>C. radiata</i> , var. <i>levis</i> , n. s., M. & W., 1870 .....            | 44-45 |

|                                                                          | Page. |
|--------------------------------------------------------------------------|-------|
| <i>Gastropoda.</i>                                                       |       |
| <i>Dentalium annulostratum</i> , n. s., M. & W., 1870 .....              | 45    |
| <i>Straparollus (Euomphalus) pernodosus</i> , n. s., M. & W., 1870 ..... | 45-46 |
| <i>S. (Euomphalus) subquadratus</i> , n. s., M. & W., 1870 .....         | 46-47 |
| <i>Subulites inflatus</i> , n. s., M. & W., 1870 .....                   | 47    |
| <i>Cephalopoda.</i>                                                      |       |
| <i>Nautilus</i> , Auct. ....                                             | 48    |
| Subgenus <i>Solenochilus</i> ,* M. & W., 1870 .....                      | 48    |
| <i>N. (Solenochilus) collectus</i> , n. s., M. & W., 1870 .....          | 48-49 |
| Subgenus <i>Temnochilus</i> , McCoy .....                                | 49    |
| <i>N. (Temnochilus) latus</i> , n. s., M. & W., 1870 .....               | 49    |
| <i>N. (Temnochilus) winstowi</i> , n. s., M. & W., 1870 .....            | 50    |
| <i>N. (Temnochilus) coxanus</i> , n. s., M. & W., 1870 .....             | 50-51 |
| <i>Lituites graftonensis</i> , n. s., M. & W., 1870 .....                | 51-52 |
| <i>Crustacea.</i>                                                        |       |
| <i>Phillipsia tuberculata</i> , n. s., M. & W., 1870 .....               | 52    |
| <i>Phillipsia (Griffithides) bufo</i> , n. s., M. & W., 1870 .....       | 52-53 |
| <i>Asaphus (Isotelus) vigilans</i> , n. s., M. & W., 1870 .....          | 53-54 |
| <i>Ilacenus (Bumastus) graftonensis</i> , n. s., M. & W., 1870 .....     | 54-55 |
| <i>Dithyrocaris carbonarius</i> , n. s., M. & W., 1870 .....             | 55-56 |

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TERTIARY SPECIES.

|                                                                       | Page. |
|-----------------------------------------------------------------------|-------|
| <i>Sphaerium rugosum</i> , n. s., Meek, 1870 .....                    | 56-75 |
| <i>S. idahoense</i> , n. s., Meek, 1870 .....                         | 57    |
| <i>Ancylus undulatus</i> , n. s., Meek, 1870 .....                    | 57-58 |
| <i>Melania (Goniobasis?) sculptilis</i> , n. s., Meek, 1870 .....     | 58    |
| <i>Melania (Goniobasis) subsculptilis</i> , n. s., Meek, 1870 .....   | 58-59 |
| <i>Carinifex binneyi</i> , n. s., Meek, 1870 .....                    | 59    |
| <i>Carinifex (Vorticifex) tryoni</i> , n. s., Meek, 1870 .....        | 59-60 |
| <i>Carinifex tryoni</i> var. <i>concava</i> , n. s., Meek, 1870 ..... | 59    |

DEVONIAN SPECIES.

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| <i>Spirifer (Trigonotreta) pinonensis</i> , n. s., Meek, 1870 ..... | 60-61 |
|---------------------------------------------------------------------|-------|

LOWER SILURIAN SPECIES.

|                                                                        |       |
|------------------------------------------------------------------------|-------|
| <i>Euomphalus (Raphistoma?) rotuliformis</i> , n. s., Meek, 1870 ..... | 61    |
| <i>E. (Raphistoma) trochiscus</i> , n. s., Meek, 1870 .....            | 61-62 |
| <i>Paradoxides? nevadensis</i> , n. s., Meek, 1870 .....               | 62-63 |
| <i>Conocoryphe (Onocephalites) kingii</i> , n. s., Meek, 1870 .....    | 63-64 |

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MEEK, F. B. Geology of the Line of the Great Pacific Railroad. [In a letter to Dr. J. J. Bigsby.] <Geological Magazine, Decade I, vol. vii, pp. 163-164. 1870. London, 1870.

Notes the fossils obtained by Mr. Clarence King along the line of the Pacific Railway.

\* σωλην, a channel; Χείλος, lip.

## 69.

MEEK, F. B. A Preliminary List of Fossils collected by Dr. Hayden in Colorado, New Mexico, and California, with Brief Descriptions of a few of the New Species. <Proc. Am. Philos. Soc., vol. xi, pp. 425-431. 1870. Philadelphia, 1871.

Silurian, Carboniferous, Jurassic, Cretaceous, and Tertiary.

## SILURIAN SPECIES.

|                                                       | Page.   |
|-------------------------------------------------------|---------|
| <i>Orthis coloradoensis</i> , n. s., Meek, 1871 ..... | 425-426 |
| <i>Bucanella nana</i> , n. s., Meek, 1871 .....       | 426     |

## CRETACEOUS SPECIES.

|                                                             |         |
|-------------------------------------------------------------|---------|
| <i>Ammonites serrato-carinatus</i> , n. s., Meek, 1871..... | 429-430 |
|-------------------------------------------------------------|---------|

## TERTIARY SPECIES.

|                                                             |     |
|-------------------------------------------------------------|-----|
| <i>Ostrea soleniscus</i> , n. s., Meek, 1871.....           | 430 |
| <i>Unio belliplicatus</i> , n. s., ? Meek, 1871 .....       | 430 |
| <i>Cyrena (Corbicula) durkeci</i> , n. s., Meek, 1871 ..... | 431 |

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Trimerella ohioensis. Republished and illustrated in Paleontology of Ohio (Newberry).

## 71.

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This article consists of descriptions of species, together with some extended remarks on the genus *Lichenocrinus* of Hall.

|                                                           | Page.   |
|-----------------------------------------------------------|---------|
| <i>Dendrocrinus casci</i> , n. s., Meek, 1871.....        | 295-296 |
| <i>Lepocrinites moorei</i> , n. s., Meek, 1871.....       | 296-297 |
| <i>Anodontopsis ? milleri</i> , n. s., Meek, 1871 .....   | 297-299 |
| <i>Anodontopsis ? unionoides</i> , n. s., Meek, 1871..... | 299     |
| Remarks on the genus <i>Lichenocrinus</i> .....           | 299-302 |

## 72.

MEEK, F. B. Descriptions of new species of invertebrate fossils from the Carboniferous and Devonian rocks of Ohio. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 57-93. 1871. Philadelphia, 1871.

## Echinodermata.

|                                                      | Page. |
|------------------------------------------------------|-------|
| <i>Dolatocrinus ornatus</i> , n. s., Meek, 1871..... | 57-59 |

## Lamellibranchiata.

|                                                                           |        |
|---------------------------------------------------------------------------|--------|
| <i>Aviculopecten crenistriatus</i> , n. s., Meek, 1871.....               | 60-61  |
| <i>Aviculopecten (streblopteria ?) hertzeri</i> , n. s., Meek, 1871 ..... | 61-62  |
| <i>Lucina (Paracyclas) ohioensis</i> , n. s., Meek, 1871 .....            | 62-63  |
| [ <i>Ptilodictya (Stictopora) gilberti</i> ,* n. s., Meek, 1871.....      | 63-64] |
| <i>Conocardium ohioense</i> , n. s., Meek, 1871 .....                     | 65-66  |
| <i>Solenomya (janeia) vetusta</i> , n. s., Meek, 1871 .....               | 66-67  |
| <i>Clinopistha antiqua</i> , n. s., Meek, 1871 .....                      | 67-68  |
| <i>Sanguinolites ? sanduskyensis</i> , n. s., Meek, 1871 .....            | 68-69  |
| <i>Sanguinolites ? obliquus</i> , n. s., Meek, 1871 .....                 | 69-70  |
| <i>Allorisma (Sedgwickia ?) pleuropistha</i> , n. s., Meek, 1871.....     | 70-71  |

\* This description was accidentally inserted by Mr. Meek in this place

|                                                                       | Page. |
|-----------------------------------------------------------------------|-------|
| <i>Grammysia? rhomboides</i> , n. s., Meek, 1871.....                 | 72-73 |
| <i>Grammysia ventricosa</i> , n. s., Meek, 1871.....                  | 73    |
| <i>Gasteropoda.</i>                                                   |       |
| <i>Platyceras multispinosum</i> , n. s., Meek, 1871.....              | 73-75 |
| <i>Platyceras attenuatum</i> , n. s., Meek, 1871.....                 | 75-76 |
| <i>Naticopsis levis</i> , n. s., Meek, 1871.....                      | 76    |
| <i>Naticopsis (Platystoma?) arguistriata</i> , n. s., Meek, 1871..... | 76-77 |
| <i>Bellerophon newberryi</i> , n. s., Meek, 1871.....                 | 77-78 |
| <i>Bellerophon propinquus</i> , n. s., Meek, 1871.....                | 78    |
| <i>Cyclonema crenulata</i> , n. s., Meek, 1871.....                   | 79    |
| <i>Isonema humilis</i> , n. s., Meek, 1871.....                       | 79-80 |
| <i>Orthonema newberryi</i> , n. s., Meek, 1871.....                   | 81    |
| <i>Trochita? antiqua</i> , n. s., Meek, 1871.....                     | 82    |
| <i>Trochonema tricarinata</i> , n. s., Meek, 1871.....                | 82-84 |
| <i>Pteropoda.</i>                                                     |       |
| <i>Conularia micronema</i> , n. s., Meek, 1871.....                   | 84    |
| <i>Conularia elegantula</i> , n. s., Meek, 1871.....                  | 85-86 |
| <i>Cephalopoda.</i>                                                   |       |
| <i>Cyrtoceras ohioense</i> , n. s., Meek, 1871.....                   | 86-87 |
| <i>Gyroceras (Trochoceras?) ohioense</i> , n. s., Meek, 1871.....     | 87-88 |
| <i>Gyroceras (Nautilus?) inelegans</i> , n. s., Meek, 1871.....       | 89    |
| <i>Crustacea.</i>                                                     |       |
| <i>Proetus planimargitus</i> , n. s., Meek, 1871.....                 | 89-91 |
| <i>Dalmanites ohioensis</i> , n. s., Meek, 1871.....                  | 91-93 |

73.

MEEK, F. B. Descriptions of new species of fossils from Ohio and other Western States and Territories. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 159-184. 1871. Philadelphia, 1871.

This paper contains descriptions of fossils, mostly Carboniferous, from Ohio, Illinois, and Texas, with a *Melantho* and *Viviparus* from Wyoming.

OHIO COLLECTIONS.

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>Fenestella delicata</i> , n. s., Meek, 1871.....                 | 159-160 |
| <i>Ptilodictya (Stictopora) carbonaria</i> , n. s., Meek, 1871..... | 160-161 |
| <i>Ariculopecten sanduskyensis</i> , n. s., Meek, 1871.....         | 161-162 |
| <i>Pterinea (Pteronites?) newarkensis</i> , n. s., Meek, 1871.....  | 162-163 |
| <i>Cypricardina? carbonaria</i> , n. s., Meek, 1871.....            | 163-165 |
| <i>Schizodus medinaensis</i> , n. s., Meek, 1871.....               | 165-166 |
| <i>Schizodus subtrigonalis</i> , n. s., Meek, 1871.....             | 166     |
| <i>Allorisma winchelli</i> , n. s., Meek, 1871.....                 | 167-168 |
| <i>Allorisma ventricosa</i> , n. s., Meek, 1871.....                | 168-169 |
| <i>Platystoma? trigonostoma</i> , n. s., Meek, 1871.....            | 169-170 |
| <i>Platyceras (Orthonychia?) lodiense</i> , n. s., Meek, 1871.....  | 170-171 |
| <i>Platyceras tortum</i> , n. s., Meek, 1871.....                   | 171-172 |
| <i>Holopea (Cyclora) nana</i> , n. s., Meek, 1871.....              | 172     |
| <i>Orthoceras? isogramma</i> , n. s., Meek, 1871.....               | 172-173 |

ILLINOIS COLLECTIONS.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| <i>Streptacis whitfieldi</i> , n. s., Meek, 1871.....                 | 173-174 |
| <i>Loxonema attenuata</i> , var. <i>semicostata</i> , Meek, 1871..... | 174-175 |
| <i>Murchisonia obsoleta</i> , n. s., Meek, 1871.....                  | 175     |
| <i>Pleurotomaria textiliger</i> , n. s., Meek, 1871.....              | 176-177 |
| <i>Pleurotomaria gurleyi</i> , n. s., Meek, 1871.....                 | 177-178 |

COLLECTIONS FROM MISSOURI, WYOMING, TEXAS, ETC.

|                                                                  |         |
|------------------------------------------------------------------|---------|
| <i>Ariculopecten? williamsi</i> , n. s., Meek, 1871.....         | 178-179 |
| <i>Spirifer (Trigonotreta?) texanus</i> , n. s., Meek, 1871..... | 179-181 |



|                                                                 | Page.   |
|-----------------------------------------------------------------|---------|
| <i>Campeloma (Melantho) macrospira</i> , n. s., Meek, 1871..... | 181-182 |
| <i>Viviparus? wyomingensis</i> , n. s., Meek, 1871 .....        | 182-183 |
| <i>Isocardia? hedyoti</i> , n. s., Meek, 1871.....              | 183-184 |

## 74.

MEEK, F. B. Notice of a new Brachiopod, from the lead-bearing rocks at Mine La Motte, Missouri. <Proc. Acad., Nat. Sci. Phila., vol. xxiii, pp. 185-187. 4 woodcuts. 1871. Philadelphia, 1871.

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| <i>Lingulella lamborni</i> , n. s., Meek, 1871, p. 185, fig. 1 ..... | 185-187 |
| <i>Lingulella davisii</i> (Salter), Davidson, figs. 2 and 3.....     | 185-187 |
| <i>Lingulepis pinniformis</i> , Hall, fig. 4 .....                   | 185-187 |

## 75.

MEEK, F. B. Descriptions of new Western Palaeozoic fossils, mainly from the Cincinnati Group of the Lower Silurian series of Ohio. <Proc. Acad. Nat. Sci. Phila., vol. xxiii, pp. 308-336. 1872. Philadelphia, 1871.

Afterward redescribed and illustrated in the Paleontology of Ohio (Newberry).

## Radiata.

## Echinodermata.

|                                                                                 | Page.   |
|---------------------------------------------------------------------------------|---------|
| <i>Heterocrinus exiguus</i> , n. s., Meek, 1872.....                            | 308-310 |
| <i>Heterocrinus subcrassus</i> , M. & W., 1865 .....                            | 310     |
| <i>Poteriocrinites (Dendrocrinus) dyeri</i> , n. s., Meek, 1872 .....           | 310-312 |
| <i>Poteriocrinites (Dendrocrinus) cincinnatiensis</i> , n. s., Meek, 1872 ..... | 312-314 |
| <i>Poteriocrinus (Dendrocrinus) polydactylus</i> , Shumard, sp., 1867 .....     | 314     |
| <i>Glyptocrinus dyeri</i> , n. s., Meek, 1872 .....                             | 314-316 |
| <i>Glyptocrinus dyeri</i> , var. <i>subglobosus</i> , Meek, 1872 .....          | 316-317 |

## Mollusca.

## Polyzoa.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Ptilodictya (Stictopora) shafferi</i> , n. s., Meek, 1872..... | 317-318 |
|-------------------------------------------------------------------|---------|

## Brachiopoda.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Retzia (Trematospira) granulifera</i> , n. s., Meek, 1872..... | 318-319 |
|-------------------------------------------------------------------|---------|

## Lamellibranchiata.

|                                                                  |         |
|------------------------------------------------------------------|---------|
| <i>Ambonychia (Megaptera) alata</i> , n. s., Meek, 1872.....     | 319-321 |
| <i>Megambonia jamesi</i> , n. s., Meek, 1872 .....               | 321-322 |
| <i>Sedgwickia? fragilis</i> , n. s., Meek, 1872 .....            | 323     |
| <i>Sedgwickia? compressa</i> , n. s., Meek, 1872.....            | 324-325 |
| <i>Sedgwickia (Grammysia?) neglecta</i> , n. s., Meek, 1872..... | 325-326 |
| <i>Dolabra? carinata</i> , n. s., Meek, 1872 .....               | 326-327 |
| <i>Cardiomorpha?? obliquata</i> , n. s., Meek, 1872.....         | 327-328 |

## Gasteropoda.

|                                                          |         |
|----------------------------------------------------------|---------|
| <i>Macrocheilus klippiarti</i> , n. s., Meek, 1872 ..... | 328-330 |
|----------------------------------------------------------|---------|

## Cephalopoda.

|                                                    |         |
|----------------------------------------------------|---------|
| <i>Orthoceras ortonii</i> , n. s., Meek, 1872..... | 330-331 |
|----------------------------------------------------|---------|

## Articulata.

## Crustacea.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| <i>Cythere cincinnatiensis</i> , n. s., Meek, 1872.....               | 331-332 |
| <i>Ceratiocaris (Colpocaris) bradleyi</i> , n. s., Meek, 1872.....    | 332-333 |
| <i>Ceratiocaris (Colpocaris) elytroides</i> , n. s., Meek, 1872 ..... | 334     |
| <i>Ceratiocaris (Solenocaris) strigata</i> , n. s., Meek, 1872.....   | 335     |
| <i>Archæocaris vermiformis</i> , n. s., Meek, 1872.....               | 335-336 |

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|                                              | Page. |
|----------------------------------------------|-------|
| <i>Sanguinolites</i> , McCoy .....           | 4     |
| Subgenus <i>Promacrus</i> , Meek, 1871 ..... | 4-5   |

Page.

|                                                                           |      |
|---------------------------------------------------------------------------|------|
| <i>S. (Promacrus) nasutus</i> , n. s., Meek, 1871, pl. i, fig. 1 .....    |      |
| <i>S. (Promacrus) missouriensis</i> , Swallow, 1860, pl. i, fig. 2.....   | 6-7  |
| <i>Prothyris</i> , Meek, 1869 .....                                       | 8    |
| <i>P. elegans</i> , n. s., Meek, 1871, pl. i, fig. 3.....                 | 8-9  |
| <i>Martesia? raessleri</i> , n. s., Meek, 1871, pl. i, figs. 4, 4 a ..... | 9-10 |

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Page.

|                                                            |     |
|------------------------------------------------------------|-----|
| <i>Macrodon obsoletus</i> , n. s., Meek, 1871 .....        | 5   |
| <i>Nucula? anodontoides</i> , n. s., Meek, 1871 .....      | 5-6 |
| <i>Yoldia stercnsoni</i> , n. s., Meek, 1871 .....         | 6   |
| <i>Yoldia (Palaeoneio?) carbonaria</i> , n. s., Meek ..... | 6-7 |
| <i>Phillipsia stercnsoni</i> , n. s., Meek, 1871 .....     | 7   |

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Page.

|                                                     |         |
|-----------------------------------------------------|---------|
| <i>Palaeaster? dyeri</i> , n. s., Meek, 1872 .....  | 257-258 |
| <i>Stenaster grandis</i> , n. s., Meek, 1872 .....  | 258-259 |
| <i>Glyptocrinus baeri</i> , n. s., Meek, 1872 ..... | 260-261 |
| Note on the Genus <i>Lichenocrinus</i> .....        | 261-262 |

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Page.

|                                                                               |         |
|-------------------------------------------------------------------------------|---------|
| <i>Anomalocystites (Ateleocystites?) balanoides</i> , n. s., Meek, 1872 ..... | 423-424 |
| <i>Dalmanites carleyi</i> , n. s., Meek, 1872 .....                           | 424-426 |
| <i>Proctas spurlucki</i> , n. s., Meek, 1872 .....                            | 426-428 |

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|                                                                         | Page.   |
|-------------------------------------------------------------------------|---------|
| <i>Protaster? granuliferus</i> , n. s., Meek, 1872 .....                | 274-275 |
| <i>Paleaster incomptus</i> , n. s., Meek, 1872 .....                    | 275-277 |
| <i>Rhynchonella neglecta</i> var. <i>scobina</i> , Meek, 1872 .....     | 277-278 |
| <i>Pleurotomaria (Scalites?) tropidophora</i> , n. s., Meek, 1872 ..... | 278-279 |
| <i>Dicraniscus</i> , n. g., Meek, 1872 .....                            | 279-280 |
| <i>D. ortonii</i> , n. s., Meek, 1872 .....                             | 280-281 |

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|                                              | Page.   |
|----------------------------------------------|---------|
| General remarks .....                        | 287-295 |
| <i>Pyrgulifera</i> , n. g., Meek, 1871 ..... | 294     |
| Lists of fossils collected .....             | 295-299 |
| Descriptions of new species and genera ..... | 299-318 |

## CARBONIFEROUS SPECIES.

|                                                          | Page.   |
|----------------------------------------------------------|---------|
| <i>Edmondia aspenwallensis</i> , n. s., Meek, 1871 ..... | 299-300 |

## CRETACEOUS FORMS.

|                                                                       |          |
|-----------------------------------------------------------------------|----------|
| <i>Crassatellina</i> , n. g., Meek, 1871 .....                        | 300, 301 |
| <i>C. oblonga</i> , n. s., Meek, 1871, figs. A & B, p. 301 .....      | 301      |
| <i>Pachymya? truncata</i> , n. s., Meek, 1871 .....                   | 301-302  |
| <i>Inoceramus altus</i> , n. s., Meek, 1871 .....                     | 302-303  |
| <i>Unio (Baphia?) nebrascensis</i> , n. s., Meek, 1871 .....          | 303      |
| <i>Arca? parallelz</i> , n. s., Meek, 1871 .....                      | 303-304  |
| <i>Yoldia microdonta</i> , n. s., Meek, 1871 .....                    | 304      |
| <i>Corbicula nuculis</i> , n. s., Meek, 1871 .....                    | 304-305  |
| <i>Corbicula? subtrigonalis</i> , n. s., Meek, 1871 .....             | 305-306  |
| <i>Cardium pauperculum</i> , n. s., Meek, 1871 .....                  | 306      |
| <i>Cardium (Protocardia) salinaense</i> , n. s., Meek, 1871 .....     | 306-307  |
| <i>Cardium kansasense</i> , n. s., Meek, 1871 .....                   | 307-308  |
| <i>Mactra? canionensis</i> , n. s., Meek, 1871 .....                  | 308      |
| <i>Arcopagella</i> , n. g., Meek, 1871 .....                          | 308      |
| <i>A. mactroides</i> , n. s., Meek, 1871, figs. A and B, p. 309 ..... | 309-310  |
| <i>Tellina subscitula</i> , n. s., Meek, 1871 .....                   | 310      |
| <i>Tapes wyomingensis</i> , n. s., Meek, 1871 .....                   | 310-311  |
| <i>Leptosolen conradi</i> , n. s., Meek, 1871 .....                   | 311-312  |
| <i>Anisomyon centrale</i> , n. s., Meek, 1871 .....                   | 312      |
| <i>Turritella kansasensis</i> , n. s., Meek, 1871 .....               | 312-313  |
| <i>Turbo mudgeanus</i> , n. s., Meek, 1871 .....                      | 313      |

## TERTIARY SPECIES.

|                                                              |         |
|--------------------------------------------------------------|---------|
| <i>Unio leanus</i> , n. s., Meek, 1871 .....                 | 313-314 |
| <i>U. washakiensis</i> , n. s., Meek, 1871 .....             | 314     |
| <i>Corbicula? fracta</i> , n. s., Meek, 1871 .....           | 314-315 |
| <i>Corbicula crassatelliformis</i> , n. s., Meek, 1871 ..... | 315-316 |
| <i>Goniobasis chrysallis</i> , n. s., Meek, 1871 .....       | 316     |
| <i>Goniobasis nodulifera</i> , n. s., Meek, 1871 .....       | 316-317 |
| <i>Bythinella gregaria</i> , n. s., Meek, 1871 .....         | 317-318 |

\* Diminutive of *disparos* a two-pronged fork.

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|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| Silurian fossils.....                                                      | 373     |
| Carboniferous fossils.....                                                 | 373-374 |
| <i>Platycrinites (Eucladocrinus) montanaensis</i> , n. s., Meek, 1872..... | 373-374 |
| Jurassic species.....                                                      | 374-375 |
| <i>Aviculopecten (Pseudomonotis?) idahoensis</i> , n. s., Meek, 1872.....  | 374-375 |
| Cretaceous species.....                                                    | 375-376 |
| <i>Ostrea idriaensis</i> , Gabb!!.....                                     | 375     |
| <i>Anomia? gryphorhynchus</i> , n. s., Meek, 1872.....                     | 375-376 |
| Tertiary species.....                                                      | 376     |

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Carboniferous fossils only. Genus Rhombopora.

|                                                                                                                                                                       | Page.   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Introductory remarks.....                                                                                                                                             | 83      |
| Statement of a boring made in the Missouri Valley at Omaha City, by the Union Pacific Railroad Company, starting 22 feet above low-water mark of the Missouri.....    | 87-88   |
| Section of beds exposed at Bellevue, with an enumeration of the fossils found in each..                                                                               | 89      |
| Section of the beds exposed on the north side of Platte River, between three and four miles from its mouth, with an enumeration of the fossils found in each bed..... | 90-91   |
| Section of the beds exposed at Plattsmouth, with the names of the fossils found in each.....                                                                          | 93      |
| Section of the beds exposed at Rock Bluff, on the Missouri, with a statement of the fossils found in each.....                                                        | 95-96   |
| Section of the rocks seen at Cedar Bluff.....                                                                                                                         | 98      |
| Section at Wyoming, with an enumeration of the imbedded fossils.....                                                                                                  | 99      |
| Section at Bennett's mill.....                                                                                                                                        | 100     |
| Section of beds exposed at the Nebraska City landing, with an enumeration of the fossils found in each.....                                                           | 101-102 |
| Section 1½ and 2½ miles due west of Nebraska City.....                                                                                                                | 103     |
| Mr. Croxton's boring at Nebraska City.....                                                                                                                            | 105-107 |
| Section of the beds exposed at Otoe City.....                                                                                                                         | 107-108 |
| Sections of the various beds exposed at Brownville.....                                                                                                               | 110     |
| Sections one and a half miles below Brownville.....                                                                                                                   | 111-112 |
| Sections of beds exposed at Aspinwall.....                                                                                                                            | 112-113 |
| Section two miles above Rulo, on the Missouri.....                                                                                                                    | 114     |
| Shaft and boring one and one-fourth miles south of Rulo.....                                                                                                          | 115     |
| Section of a boring two miles south of Saint Joseph, 60 feet above high water of the Missouri.....                                                                    | 117-118 |
| Section of the rocks exposed at Riverside, Kansas, and along the river bluff between there and the Atchison Landing.....                                              | 119-120 |
| Boring at Atchison, Kansas, commencing 22½ feet above high-water mark of the Missouri; made by the Atchison Coal Company, 1865-'66.....                               | 121-122 |
| Tabular list, illustrating the geological and geographical range of the fossils of Eastern Nebraska.....                                                              | 124-127 |
| Remarks on the probability of finding valuable beds of coal within profitable working distance of the surface in Eastern Nebraska.....                                | 134-139 |

# DESCRIPTIONS OF FOSSILS.

## Protozoa.

### Foraminifera.

#### *Fusulina*, Fischer.

*F. cylindrica*, Fischer, 1837, pl. i, fig. 2; pl. ii, fig. 1; pl. v, figs. 3 a, b; pl. vii, figs. 8 a, b.. 140-141

## Radiata.

### Polypi.

*Rhombopora*, Meek, n. g., 1872..... 141

*R. lepidodendroides*, n. s., Meek, 1872, pl. vii, figs. 2 a-f..... 141-143

*Fistulipora*, McCoy..... 143



|                                                                                                                                                                        | Page.   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>F. nodulifera</i> , n. s., Meek, 1872, pl. v, figs. 5 <i>a-d</i> .....                                                                                              | 143-144 |
| <i>Syringopora</i> , Goldfuss.....                                                                                                                                     | 144     |
| <i>S. multattenuata</i> , McChesney, 1860, pl. i, figs. 5 <i>a-d</i> .....                                                                                             | 144     |
| <i>Lophophyllum</i> , Edwards & Haime.....                                                                                                                             | 144     |
| <i>L. proliferum</i> , McChesney, sp., 1860, pl. v, figs. 4 <i>a, b</i> .....                                                                                          | 144-145 |
| <i>Campophyllum</i> , Edwards & Haime.....                                                                                                                             | 145     |
| <i>C. torquium</i> , Owen, sp., 1852, pl. i, figs. 1 <i>a-d</i> .....                                                                                                  | 145-146 |
| <i>Echinodermata.</i>                                                                                                                                                  |         |
| <i>Erisocrinus</i> , M. & W.....                                                                                                                                       | 146     |
| <i>E. typus</i> , M. & W., 1865, pl. i, figs. 3 <i>a, b</i> , and fig. 1, p. 146.....                                                                                  | 146-147 |
| <i>Scaphiocrinus</i> , Hall.....                                                                                                                                       | 147     |
| <i>S. ? hemisphaericus</i> , Shumard, sp., 1858, pl. v, figs. 1 <i>a, b</i> ; pl. vii, figs. 1 <i>a-c</i> , and fig. 2, p. 148.....                                    | 147-149 |
| <i>Zocrinus</i> , Troost.....                                                                                                                                          | 149     |
| <i>Z. ? microspinus</i> , McChesney, 1860, pl. v, figs. 2 <i>a-c</i> .....                                                                                             | 149-150 |
| <i>Eupachycrinus</i> , M. & W.....                                                                                                                                     | 150     |
| <i>E. verrucosus</i> , White & St. John, 1869, figs. 3 and 4 <i>a-d</i> , p. 150.....                                                                                  | 150-151 |
| <i>Archæocidaris</i> , McCoy.....                                                                                                                                      | 151     |
| <i>A. ? triserrata</i> , n. s., Meek, 1872, pl. i, figs. 6 <i>a-c</i> .....                                                                                            | 151-152 |
| <i>Eocidaris</i> , Desor.....                                                                                                                                          | 152     |
| <i>E. hallianus</i> , Geinitz, 1866, pl. vii, figs. 9 <i>a-d</i> .....                                                                                                 | 152     |
| <i>Mollusca.</i>                                                                                                                                                       |         |
| <i>Polyzoa.</i>                                                                                                                                                        |         |
| <i>Fenestella</i> , Lonsdale.....                                                                                                                                      | 152     |
| <i>Fenestella</i> , sp., pl. i, figs. 4 <i>a, b</i> .....                                                                                                              | 152-153 |
| <i>F. shumardi</i> , Prout ?, 1858, pl. vii, figs. 3 <i>a-c</i> .....                                                                                                  | 153-154 |
| <i>Polypora</i> , McCoy.....                                                                                                                                           | 154     |
| <i>P. submarginata</i> , n. s., Meek, 1872, pl. vii, figs. 7 <i>a, b</i> .....                                                                                         | 154-155 |
| <i>Polypora</i> , sp. undt., Meek, pl. vii, figs. 6.....                                                                                                               | 155     |
| <i>Syncladia</i> , King.....                                                                                                                                           | 156     |
| <i>S. biserialis</i> , Swallow, 1858, pl. vii, figs. 5 <i>a-e</i> .....                                                                                                | 156-157 |
| <i>Glaucanome</i> , Goldfuss.....                                                                                                                                      | 157     |
| <i>G. trilineata</i> , Meek, n. s., 1872, pl. vii, figs. 4 <i>a-d</i> .....                                                                                            | 157-158 |
| <i>Brachiopoda.</i>                                                                                                                                                    |         |
| <i>Lingula</i> , Bruguière.....                                                                                                                                        | 158     |
| <i>L. scotica</i> , var. <i>nebrascensis</i> , Meek, 1872, pl. viii, figs. 3 <i>a, b</i> .....                                                                         | 158     |
| <i>Orbiculoidea</i> , d'Orbigny.....                                                                                                                                   | 158     |
| <i>Orbiculoidea</i> , sp., pl. iv, fig. 3.....                                                                                                                         | 158-159 |
| <i>Productus</i> , Sowerby.....                                                                                                                                        | 159     |
| <i>P. costatus</i> , Sowerby?? sp., 1827, pl. vi, figs. 6 <i>a, b</i> .....                                                                                            | 159-160 |
| <i>P. semireticulatus</i> , Martin, sp., 1809, pl. v, figs. 7 <i>a, b</i> .....                                                                                        | 160-161 |
| <i>P. longispinus</i> , Sowerby, ? 1814, pl. vi, fig. 7, and pl. viii, figs. 6 <i>a-c</i> .....                                                                        | 161-163 |
| <i>P. prattenianus</i> , Norwood, 1854, pl. ii, figs. 5 <i>a-c</i> , pl. v, fig. 13, and pl. viii, figs. 10 <i>a, b</i> .....                                          | 163-164 |
| <i>P. pertenuis</i> , n. s., Meek, 1872, pl. i, figs. 14 <i>a-c</i> , and pl. viii, figs. 9 <i>a-d</i> .....                                                           | 164-165 |
| <i>P. nebrascensis</i> , Owen, 1852, pl. ii, fig. 2, pl. iv, fig. 6, and pl. v, figs. 11 <i>a-c</i> .....                                                              | 165-167 |
| <i>P. symmetricus</i> , McChesney, 1860, pl. v, figs. 6 <i>a, b</i> , and pl. viii, fig. 13.....                                                                       | 167-168 |
| <i>P. punctatus</i> , Martin, sp., 1809, pl. ii, fig. 6, and pl. iv, fig. 5.....                                                                                       | 169     |
| <i>Chonetes</i> , Fischer.....                                                                                                                                         | 170     |
| <i>C. verneuilliana</i> , Norwood & Pratten, 1854, pl. i, figs. 10 <i>a, b</i> .....                                                                                   | 170     |
| <i>C. granulifera</i> , Owen, 1855, pl. iv, fig. 9, pl. vi, fig. 10, pl. viii, fig. 7.....                                                                             | 170-171 |
| <i>C. glabra</i> , Geinitz, 1866, pl. iv, fig. 10, pl. viii, figs. 8 <i>a, b</i> .....                                                                                 | 171-172 |
| <i>Orthis</i> , Dalman.....                                                                                                                                            | 173     |
| <i>O. carbonaria</i> , Swallow, 1858, pl. i, figs. 8 <i>a-c</i> .....                                                                                                  | 173     |
| <i>Hemipronites</i> .....                                                                                                                                              | 173     |
| <i>H. crassus</i> , M. & H., 1858, pl. v, figs. 10 <i>a-c</i> , and pl. viii, fig. 1.....                                                                              | 174-175 |
| <i>Meekella</i> , White & St. John.....                                                                                                                                | 175     |
| <i>M. striato-costata</i> , Cox, sp., 1857, pl. v, figs. 12 <i>a-c</i> , and figs. 5 <i>a, b</i> , and 6, p. 175.....                                                  | 175-177 |
| <i>Syntrielasma</i> , M. & W.....                                                                                                                                      | 177     |
| <i>S. hemiplicata</i> , Hall, sp., 1852, pl. vi, figs. 1 <i>a, b</i> , and pl. viii, figs. 12 <i>a, b</i> , and figs. 7 <i>a-c</i> , figs. 8 <i>a, b</i> , p. 177..... | 177-178 |
| <i>Rhynchonella</i> , Fischer.....                                                                                                                                     | 179     |
| <i>R. osagensis</i> , Swallow, 1858, pl. i, figs. 9 <i>a, b</i> , and pl. vi, figs. 2 <i>a, b</i> .....                                                                | 179-180 |
| <i>Athyris</i> , McCoy.....                                                                                                                                            | 180     |
| <i>A. subtilita</i> , Hall, sp., 1852, pl. i, fig. 12, pl. v, fig. 8, and pl. viii, fig. 4.....                                                                        | 180-181 |
| <i>Retzia</i> , King.....                                                                                                                                              | 181     |

|                                                                                                                        | Page.   |
|------------------------------------------------------------------------------------------------------------------------|---------|
| <i>R. punctulifera</i> , Shumard, 1858, pl. i, fig. 13, and pl. v, fig. 7.....                                         | 181-183 |
| <i>Spirifer</i> , Sowerby .....                                                                                        | 183     |
| <i>S. cameratus</i> , Morton, 1836, pl. vi, fig. 12, and pl. viii, fig. 15.....                                        | 183-184 |
| <i>S. (Martinia) planoconvexus</i> , Shumard, 1855, pl. iv, figs. 4 <i>a, b</i> , and pl. viii, figs. 2 <i>a, b</i> .. | 184-185 |
| <i>Spiriferina</i> , d'Orbigny.....                                                                                    | 185     |
| <i>S. kentuckensis</i> , Shumard, 1855, pl. vi, figs. 3 <i>a-d</i> , and pl. viii, figs. 11 <i>a, b</i> .....          | 185-186 |
| <i>Terebratulæ</i> , Lihwyd .....                                                                                      | 187     |
| <i>T. bovidens</i> , Morton, 1836, pl. i, figs. 7 <i>a-d</i> , and pl. ii, fig. 4.....                                 | 187-188 |
| <i>Lamellibranchiata.</i>                                                                                              |         |
| <i>Lima</i> , Bruguière.....                                                                                           | 188     |
| <i>L. retifera</i> , Shumard, 1858, pl. ix, fig. 5.....                                                                | 188-189 |
| <i>Entolium</i> , Meek .....                                                                                           | 189     |
| <i>E. aviculatum</i> , Swallow, sp., 1858, pl. ix, figs. 11 <i>a-f</i> .....                                           | 189-191 |
| <i>Aviculopecten</i> , McCoy .....                                                                                     | 191     |
| <i>A. occidentalis</i> , Shumard, sp., 1855, pl. ix, fig. 10.....                                                      | 191-193 |
| <i>A. neglectus</i> , Geinitz, sp., 1866, pl. ix, figs. 1 <i>a, b</i> .....                                            | 193     |
| <i>A. carboniferus</i> , Stevens, sp., 1858, pl. iv, fig. 8 and pl. ix, figs. 4 <i>a, b</i> .....                      | 193-195 |
| <i>A. whitii</i> , n. s., Meek, 1872, pl. iv, figs. 11 <i>a-c</i> .....                                                | 195     |
| <i>A. coxanus</i> , M. & W., 1860, pl. ix, figs. 2 <i>a, b</i> .....                                                   | 196     |
| <i>Aviculopinna</i> , Meek.....                                                                                        | 197     |
| <i>A. americana</i> , Meek, 1867, pl. ix, figs. 12 <i>a-d</i> .....                                                    | 197-198 |
| <i>Pinna</i> , Linnæus .....                                                                                           | 198     |
| <i>P. peracuta</i> , Shumard, 1858, pl. vi, fig. 11 <i>a, b</i> .....                                                  | 198     |
| <i>Avicula</i> (Klein), Brug .....                                                                                     | 199     |
| <i>A. longa</i> , Geinitz, sp., 1866, pl. ix, fig. 8.....                                                              | 199     |
| <i>A. ? sulcata</i> , Geinitz, 1866, pl. ix, fig. 9.....                                                               | 200     |
| <i>Pseudomonotis</i> , Beyrich.....                                                                                    | 200     |
| <i>Pseudomonotis</i> , sp., pl. ii, fig. 11.....                                                                       | 200-201 |
| <i>P. radialis</i> , Phillips ? sp., 1834, pl. ix, fig. 3.....                                                         | 201     |
| <i>Myalina</i> , de Koninck .....                                                                                      | 201     |
| <i>M. [?] swallovi</i> , McChesney, 1860, pl. ix, figs. 7 <i>a, b</i> .....                                            | 201-202 |
| <i>M. subquadrata</i> , Shumard, 1855, pl. iv, fig. 12 and pl. ix, fig. 6.....                                         | 202-203 |
| <i>Nucula</i> , Lamarck .....                                                                                          | 203     |
| <i>N. beyrichi</i> , v. Schauroth ? 1854, pl. x, fig. 18.....                                                          | 203-204 |
| <i>N. ventricosa</i> , Hall, 1858, pl. x, figs. 17 <i>a-c</i> .....                                                    | 204-205 |
| <i>Yoldia</i> , Möller .....                                                                                           | 205     |
| <i>Y. subscitula</i> , M. & H., ? 1858, pl. x, fig. 10.....                                                            | 205-206 |
| <i>Nuculana</i> , Link .....                                                                                           | 206     |
| <i>N. bellistriata</i> var. <i>attenuata</i> , pl. x, figs. 11 <i>a, b</i> .....                                       | 206-207 |
| <i>Macrodon</i> , Lycett.....                                                                                          | 207     |
| <i>M. tenuistriata</i> , M. & W., 1867, pl. x, figs. 20, <i>a, b</i> .....                                             | 207-208 |
| <i>Schizodus</i> , King.....                                                                                           | 208     |
| <i>S. curtus</i> , M. & W., ? 1866, pl. x, figs. 13 <i>a-c</i> ( <i>d?</i> ), <i>e</i> .....                           | 208-209 |
| <i>S. wheeleri</i> , Swallow, sp., 1862, pl. x, figs. 1 <i>a-d</i> (and <i>e, f?</i> ).....                            | 209-210 |
| <i>Schizodus</i> , undt. pl. x, fig. 2.....                                                                            | 210-211 |
| <i>Modiola</i> , Lamarck .....                                                                                         | 211     |
| <i>M. ? subelliptica</i> , Meek, 1867, pl. x, fig. 5.....                                                              | 211-212 |
| <i>Pleurophorus</i> , King .....                                                                                       | 212     |
| <i>P. oblongus</i> , n. s., Meeks, 1872, pl. x, fig. 4 <i>a-c</i> .....                                                | 212     |
| <i>P. occidentalis</i> , M. & H., ? 1858, pl. x, fig. 12.....                                                          | 212-213 |
| <i>Edmondia</i> , de Koninck .....                                                                                     | 213     |
| <i>E. reflexa</i> , n. s., Meek, 1872, pl. x, figs. 6 <i>a, b</i> , and pl. iv, fig. 7 ? .....                         | 213-214 |
| <i>E. ? glabra</i> n. s., Meek, 1872, pl. x, figs. 7 <i>a, b</i> .....                                                 | 214     |
| <i>E. ? nebrascensis</i> , Geinitz, sp., 1866, pl. x, figs. 8 <i>a, b</i> .....                                        | 214-215 |
| <i>E. subtruncata</i> n. s., Meek, 1872, pl. ii, fig. 7.....                                                           | 215-216 |
| <i>E. aspinwallensis</i> , Meek, 1871, pl. iv, figs. 2 <i>a-c</i> .....                                                | 216     |
| <i>Chenomya</i> , M. & H.....                                                                                          | 210     |
| <i>C. leavenworthensis</i> , M. & H., 1858, pl. ii, fig. 9.....                                                        | 216-217 |
| <i>C. minehaha</i> , Swallow, sp., 1858, pl. — figs. 13 <i>a, b</i> .....                                              | 217     |
| <i>Allorisma</i> , King .....                                                                                          | 217     |
| <i>A. (Sedgwickia) reflexa</i> , n. s., Meek, 1872, pl. x, fig. 15.....                                                | 217-218 |
| <i>A. (Sedgwickia) geinitzii</i> , Meek, 1867, pl. x, figs. 16 <i>a, b</i> .....                                       | 219     |
| <i>A. (Sedgwickia ?) subelegans</i> n. s., Meek, 1872, pl. x, fig. 14.....                                             | 220     |
| <i>A. (Sedgwickia) granosa</i> , Shumard, sp., 1858, pl. ii, fig. 8.....                                               | 220-221 |
| <i>A. subcuneata</i> , M. & H., 1858, pl. ii, figs. 10 <i>a, b</i> .....                                               | 221-222 |

|                                                                                                                                  | Page.   |
|----------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Prothyris</i> , Meek .....                                                                                                    | 223     |
| <i>P. elegans</i> , Meek, 1871, pl. x, figs. 9 <i>a</i> , <i>b</i> .....                                                         | 223     |
| <i>Solenopsis</i> , McCoy .....                                                                                                  | 223     |
| <i>S. solenoides</i> , Geinitz, sp., 1866, pl. x, fig. 3 .....                                                                   | 223-224 |
| <i>Gasteropoda</i> , Cuvier.                                                                                                     |         |
| <i>Dentalium</i> , Linnæus .....                                                                                                 | 224     |
| <i>D. meekianum</i> , Geinitz, 1866, pl. xi, figs. 16 <i>a</i> , <i>b</i> .....                                                  | 224     |
| <i>Bellerophon</i> , Montfort .....                                                                                              | 224     |
| <i>B. carbonarius</i> , Cox, 1857, pl. iv, fig. 16, pl. xi, figs. 11 <i>a</i> - <i>c</i> .....                                   | 224-225 |
| <i>B. montfortianus</i> , Norwood & Pratten, 1855, pl. xi, fig. 15, and 12? .....                                                | 225-226 |
| <i>B. marcouianus</i> , Geinitz, 1866, pl. iv, fig. 17, and pl. xi, figs. 13 <i>a</i> , <i>b</i> .....                           | 226-227 |
| <i>B. percarinatus</i> , Conrad, 1842, pl. xi, fig. 14 .....                                                                     | 227     |
| <i>Platyceras</i> , Conrad .....                                                                                                 | 227     |
| <i>P. nebrascensis</i> , n. s., Meek, 1872, pl. iv, figs. 15 <i>a</i> , <i>b</i> .....                                           | 227-228 |
| <i>Macrocheilus</i> , Phillips .....                                                                                             | 228     |
| <i>M. intercalaris</i> var. <i>pulchellus</i> , M. & W., 1860, pl. vi, fig. 8 .....                                              | 228     |
| <i>Orthonema</i> , M. & W. ....                                                                                                  | 228     |
| <i>O. subtaeniata</i> , Geinitz, sp., 1866, pl. xi, fig. 10 .....                                                                | 228-229 |
| <i>Aclis</i> , Loven .....                                                                                                       | 229     |
| <i>A. swallowiana</i> , Geinitz, sp., 1866, pl. xi, figs. 7 <i>a</i> , <i>b</i> .....                                            | 229-230 |
| <i>Straparollus</i> , Montfort .....                                                                                             | 230     |
| <i>S. (Euomphalus) rugosus</i> , Hall, 1858, pl. vi, figs. 5 <i>a</i> , <i>b</i> , and pl. xi, figs. 4 <i>a</i> , <i>b</i> ..... | 230-231 |
| <i>Pleurotomaria</i> , Defrance .....                                                                                            | 231     |
| <i>P. haydeniana</i> , Geinitz, 1866, pl. xi, fig. 5 .....                                                                       | 231     |
| <i>P. perhumerosa</i> , n. s., Meek, 1872, pl. iv, figs. 13 <i>a</i> , <i>b</i> .....                                            | 232     |
| <i>P. inornata</i> , n. s., Meek, 1872, pl. iv, fig. 14 .....                                                                    | 232-233 |
| <i>P. grayvillensis</i> , Norwood & Pratten, 1855, pl. xi, fig. 9 .....                                                          | 233     |
| <i>P. marcouiana</i> , Geinitz, 1866, pl. xi, fig. 8 .....                                                                       | 233     |
| <i>P. subdeussata</i> , Geinitz, 1866, pl. xi, fig. 19 .....                                                                     | 233     |
| <i>Murchisonia</i> , de Verneuil .....                                                                                           | 234     |
| <i>M. nebrascensis</i> , Geinitz, 1866, pl. xi, fig. 6 .....                                                                     | 234     |
| <i>Cephalopoda</i> .                                                                                                             |         |
| <i>Orthoceras</i> , Auct. ....                                                                                                   | 234     |
| <i>O. cribrosum</i> , Geinitz, 1866, pl. xi, figs. 18 <i>a</i> , <i>b</i> .....                                                  | 234     |
| <i>Nautilus</i> , Linn. ....                                                                                                     | 234     |
| <i>N. occidentalis</i> , Swallow, 1858, pl. xi, fig. 17 .....                                                                    | 234-236 |
| <i>N. ponderosus</i> , White, M. S., 1872, pl. iii, figs. 7 <i>a</i> , <i>b</i> .....                                            | 236     |
| <i>Articulata</i> .                                                                                                              |         |
| <i>Crustacea</i> .                                                                                                               |         |
| <i>Cythere</i> , Müller .....                                                                                                    | 237     |
| <i>C. nebrascensis</i> , Geinitz, 1866, pl. xi, figs. 2; and 3 <i>a</i> , <i>b</i> ? .....                                       | 237     |
| <i>Cythere</i> , sp., pl. xi, figs. 1 <i>a</i> - <i>d</i> .....                                                                  | 237     |
| <i>Phillipsia</i> , Portlock .....                                                                                               | 237     |
| <i>Phillipsia</i> , sp., Geinitz, 1866, pl. iii, figs. 1 <i>a</i> , <i>b</i> .....                                               | 237-238 |
| <i>P. scitula</i> , M. & W., 1865, pl. vi, fig. 9 .....                                                                          | 238     |
| <i>P. major</i> , Shumard, 1858, pl. iii, figs. 2 <i>a</i> - <i>c</i> .....                                                      | 238-239 |

MEEK, F. B. [Geological reports on Miller, Morgan, and Saline Counties, Missouri.]  
 <Reports on the Geological Survey of the State of Missouri, 1855-'71, by G. C. Broadhead, F. B. Meek, and B. F. Shumard, chapters vii-ix, pp. 111-188. Jefferson City, 1873.

Geological maps of Miller and Morgan Counties accompany these reports.

#### CHAPTER VII.

|                                                    | Page. |
|----------------------------------------------------|-------|
| Miller County .....                                | 112   |
| Streams .....                                      | 112   |
| Springs .....                                      | 114   |
| Timber .....                                       | 115   |
| Geological structure of Miller County .....        | 115   |
| Quaternary system.—Alluvium .....                  | 117   |
| Carboniferous system .....                         | 118   |
| Lower Silurian rocks.—Saccharoidal sandstone ..... | 118   |



|                                                   | Page. |
|---------------------------------------------------|-------|
| Second magnesian limestone.....                   | 118   |
| Second sandstone.....                             | 121   |
| Third magnesian limestone.....                    | 123   |
| Third sandstone.....                              | 127   |
| Fourth magnesian limestone.....                   | 127   |
| Economical geology.....                           | 128   |
| Soil, clays for the manufacture of bricks.....    | 128   |
| Building stones.....                              | 128   |
| Road material, limestone for quicklime, sand..... | 129   |
| Iron ore.....                                     | 130   |
| Lead.....                                         | 131   |
| Coal.....                                         | 132   |
| Sulphate of baryta.....                           | 133   |

CHAPTER VIII.

|                                         |     |
|-----------------------------------------|-----|
| Morgan County.....                      | 135 |
| Springs.....                            | 136 |
| Streams.....                            | 137 |
| Timber.....                             | 138 |
| Geological structure.....               | 138 |
| Quaternary system.—Alluvium.....        | 139 |
| Carboniferous rocks.—Coal measures..... | 140 |
| Encrinital limestone.....               | 140 |
| Chouteau limestone.....                 | 141 |
| Silurian system.....                    | 141 |
| First magnesian limestone.....          | 141 |
| Saccharoidal sandstone.....             | 142 |
| Second magnesian limestone.....         | 143 |
| Second sandstone.....                   | 144 |
| Third magnesian limestone.....          | 145 |
| Third sandstone.....                    | 147 |
| Fourth magnesian limestone.....         | 148 |
| Economical geology.....                 | 149 |
| Soils.....                              | 149 |
| Coal.....                               | 149 |
| Lead.....                               | 152 |
| Iron ore.....                           | 155 |
| Heavy spar.....                         | 156 |
| Building material.....                  | 156 |

CHAPTER IX.

|                                                             |     |
|-------------------------------------------------------------|-----|
| Saline County.....                                          | 157 |
| Streams.....                                                | 158 |
| Timber.....                                                 | 159 |
| Geological structure.....                                   | 160 |
| Quaternary deposits.....                                    | 161 |
| Alluvium of the Missouri Flats.....                         | 161 |
| Bluff or Loess Deposit.....                                 | 161 |
| Drift.....                                                  | 162 |
| Carboniferous rocks.—Coal measures.....                     | 163 |
| Ferruginous sandstone.....                                  | 172 |
| Archimedes limestone.....                                   | 172 |
| Encrinital limestone.....                                   | 173 |
| Chouteau limestone.....                                     | 174 |
| Cooper marble.....                                          | 176 |
| Semi-crystalline limestone.....                             | 176 |
| Silurian system.....                                        | 178 |
| Trenton limestone.....                                      | 178 |
| Saccharoidal sandstone.....                                 | 178 |
| Economical geology.....                                     | 179 |
| Soil.....                                                   | 179 |
| Coal.....                                                   | 180 |
| Building stone.....                                         | 180 |
| Limestones for making lime, sand, clays for bricks, &c..... | 181 |
| Springs.....                                                | 181 |



## 88.

MEEK, F. B. Spargen Hill fossils identified among specimens from Idaho. <Am. Journ. Sci., vol. v, 3d ser., pp. 383, 384. 1873. New Haven, 1873.

The author identifies, among some collections made by Prof. F. H. Bradley, some of the minute species of Mollusca, for which the locality in Washington County, Indiana, known as Spargen Hill, is noted. A list of the species identified is given, but no discussion of them is made.

## 89.

MEEK, F. B. Preliminary Paleontological Report, consisting of lists and descriptions of fossils, with remarks on the ages of the rocks in which they were found, &c., &c. <Sixth Ann. Report of the U. S. Geol. Survey of the Territories, pp. 431-518. 1873. Washington, 1873.

## Genera Admetopsis, Velatella.

|                                                                                                                | Page.   |
|----------------------------------------------------------------------------------------------------------------|---------|
| General remarks .....                                                                                          | 431     |
| Silurian age .....                                                                                             | 431-432 |
| Carboniferous age .....                                                                                        | 432-434 |
| Jurassic age .....                                                                                             | 434-435 |
| Cretaceous age .....                                                                                           | 435-438 |
| Section from about 1½ miles northeast of Coalville, in a northwesterly direction, to Echo Cañon, fig. 52 ..... | 439-440 |
| Section of the rocks exposed on Sulphur Creek, near Bear River, Wyoming, fig. 53 .....                         | 451-452 |
| Tertiary age .....                                                                                             | 462     |
| Lists of fossils collected .....                                                                               | 463     |

## Descriptions of new species of fossils.

## SILURIAN FORMS.

|                                                                                          |         |
|------------------------------------------------------------------------------------------|---------|
| <i>Iphidea</i> (?) <i>sculptilis</i> , n. s., Meek, 1873 .....                           | 479     |
| <i>Asaphus</i> ( <i>Megalaspis</i> ?) <i>goniocercus</i> , n. s., Meek, 1873 .....       | 480     |
| <i>Bathyrurus serratus</i> , n. s., Meek, 1873 .....                                     | 480-482 |
| <i>B. ? haydeni</i> , n. s., Meek, 1873 .....                                            | 482-484 |
| <i>Bathyurellus</i> ( <i>Aspiscus</i> ) <i>bradleyi</i> , n. s., Meek, 1873 .....        | 484-485 |
| <i>Conocoryphe</i> ( <i>Ptychoparia</i> ) <i>gallatinensis</i> , n. s., Meek, 1873 ..... | 485-487 |

## CRETACEOUS FORMS.

|                                                                                       |         |
|---------------------------------------------------------------------------------------|---------|
| <i>Ostrea soleniscus</i> , Meek, 1870 .....                                           | 487-488 |
| <i>Ostrea anomioides</i> , n. s., Meek, 1873 .....                                    | 488     |
| <i>Avicula</i> ( <i>Pseudoptera</i> ) <i>propleura</i> , n. s., Meek, 1873 .....      | 489-490 |
| <i>Avicula</i> ( <i>Pseudoptera</i> ) <i>rhytophora</i> , n. s., Meek, 1873 .....     | 490-491 |
| <i>Avicula</i> ( <i>Oxytoma</i> ) <i>gastrades</i> , n. s., Meek, 1873 .....          | 491-492 |
| <i>Modiola</i> ( <i>Brachydontes</i> ) <i>multilinigera</i> , n. s., Meek, 1873 ..... | 492-493 |
| <i>Trapezium micronema</i> , n. s., Meek, 1873 .....                                  | 493     |
| <i>Corbicula</i> ( <i>Veloritina</i> ) <i>inflexa</i> , n. s., Meek, 1873 .....       | 493-494 |
| <i>Corbicula</i> ( <i>Cyrena</i> ?) <i>securis</i> , n. s., Meek, 1873 .....          | 494-495 |
| <i>Corbicula aspidatoralis</i> , n. s., Meek, 1873 .....                              | 495     |
| <i>Cyrena carletoni</i> , n. s., Meek, 1873 .....                                     | 495-496 |
| <i>Pharella ? pealei</i> , n. s., Meek, 1873 .....                                    | 496     |
| <i>Corbula nematophora</i> , n. s., Meek, 1873 .....                                  | 496-497 |
| <i>Neritina</i> ( <i>Dostia</i> ?) <i>bellatula</i> , n. s., Meek, 1873 .....         | 497-498 |
| <i>Neritina</i> ( <i>Dostia</i> ?) <i>patelliformis</i> , n. s., Meek, 1873 .....     | 498-499 |
| <i>Neritina</i> ( <i>Dostia</i> ?) <i>carditoides</i> , n. s., Meek, 1873 .....       | 499     |
| <i>Neritina</i> ( <i>Neritella</i> ) <i>bannisteri</i> , n. s., Meek, 1873 .....      | 499-500 |
| <i>Neritina</i> ( <i>Neritella</i> ) <i>pisum</i> , n. s., Meek, 1873 .....           | 500     |
| <i>Neritina pisiformis</i> , n. s., Meek, 1873 .....                                  | 500-501 |
| <i>Admete ? rhomboides</i> , n. s., Meek, 1873 .....                                  | 501     |
| <i>Admete ? gregaria</i> , n. s., Meek, 1873 .....                                    | 501-502 |
| <i>Admete ? subfusiformis</i> , n. s., Meek, 1873 .....                               | 502     |
| <i>Turritella coalvillensis</i> , n. s., Meek, 1873 .....                             | 502-503 |
| <i>Turritella spironema</i> , n. s., Meek, 1873 .....                                 | 503-504 |
| <i>Turritella</i> ( <i>Aclis</i> ?) <i>micronema</i> , n. s., Meek, 1873 .....        | 504     |
| <i>Fusus</i> ( <i>Neptunea</i> ?) <i>gabbi</i> , n. s., Meek, 1873 .....              | 504-505 |
| <i>Fusus</i> ( <i>Neptunea</i> ?) <i>utahensis</i> , n. s., Meek, 1873 .....          | 505     |

|                                                                        | Page.   |
|------------------------------------------------------------------------|---------|
| <i>Turbonilla (Chemnitzia?) coalvillensis</i> , n. s., Meek, 1873..... | 505-506 |
| <i>Eulina funicula</i> , n. s., Meek, 1873.....                        | 506     |
| <i>Eulina chrysalis</i> , n. s., Meek, 1873.....                       | 506     |
| <i>Eulina? inconspicua</i> , n. s., Meek, 1873.....                    | 507     |
| <i>Melampus antiquus</i> , n. s., Meek, 1873.....                      | 507     |
| <i>Valvata nana</i> , n. s., Meek, 1873.....                           | 507     |
| <i>Physa carletoni</i> , n. s., Meek, 1873.....                        | 508     |

*Species from the Bitter Creek series.*

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
| <i>Ostrea wyomingensis</i> , Meek, 1872.....                          | 508-509 |
| <i>Anomia (Placunopsis?) gryphorhyncus</i> , Meek, 1871.....          | 509-511 |
| <i>Corbicula (Veloritina) cytheriformis</i> , M. & H., 1860.....      | 511     |
| <i>Corbicula? fracta</i> , var. <i>crassiuscula</i> , Meek, 1873..... | 512-513 |
| <i>Corbicula (Veloritina) bannisteri</i> , n. s., Meek, 1873.....     | 513     |
| <i>Corbula undifera</i> , n. s., Meek, 1873.....                      | 513-514 |
| <i>Corbula tropidophora</i> , n. s., Meek, 1873.....                  | 514-515 |
| <i>Goniobasis? insculpta</i> , n. s., Meek, 1873.....                 | 515-516 |
| <i>Melania (Goniobasis?) wyomingensis</i> , n. s., Meek, 1873.....    | 516     |

*Tertiary forms.*

|                                                                  |         |
|------------------------------------------------------------------|---------|
| <i>Physa bridgerensis</i> , n. s., Meek, 1873.....               | 516-517 |
| <i>Limnæa (Limnophysa?) compactilis</i> , n. s., Meek, 1873..... | 517     |
| <i>Pupa? leidyii</i> , n. s., Meek, 1873.....                    | 517-518 |

90.

MEEK, F. B. Descriptions of Invertebrate fossils of the Silurian and Devonian systems. <Geol. Surv. of Ohio, vol. i, part ii. Palæontology, pp. 1-243, plates 1-23, and 3 plates of diagrams of Crinoids. 1873. Columbus, 1873.

FOSSILS OF THE CININNATI GROUP.

*Radiata.*

*Echinodermata.*

*Crinoidea.*

|                                                                                                                                                 | Page.  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <i>Heterocrinus</i> , Hall, 1847.....                                                                                                           | 1-2    |
| <i>H. constrictus</i> , Hall, 1866, pl. i, figs. 10 <i>a</i> , <i>b</i> (and 11?).....                                                          | 3-5    |
| <i>H. exilis</i> , Hall? 1868, pl. i, fig. 12.....                                                                                              | 5-7    |
| <i>H. simplex</i> , Hall, 1847, pl. i, figs. 4 <i>a</i> , <i>b</i> ; 5 <i>a</i> , <i>b</i> (with 6 <i>a</i> , <i>b</i> and 7 <i>a-c</i> ?)..... | 7-10   |
| <i>H. juvenis</i> , Hall, 1866, pl. i, figs. 3 <i>a-c</i> .....                                                                                 | 10-12  |
| <i>H. heterodactylus</i> , Hall? 1847, pl. i, figs. 1 <i>a</i> , <i>b</i> (and 2 <i>a</i> , <i>b</i> ?).....                                    | 12-14  |
| <i>H. laxus</i> , Hall, 1872, pl. i, figs. 8 <i>a</i> , <i>b</i> .....                                                                          | 14, 15 |
| <i>H. (Iocrinus) subcrassus</i> , M. and W., 1865, pl. i, figs. 9 <i>a</i> , <i>b</i> .....                                                     | 15-17  |
| <i>Anomalocrinus</i> , M. and W., 1868.....                                                                                                     | 17     |
| <i>A. incurvus</i> , M. and W., 1865, pl. ii, figs. 6 <i>a-f</i> .....                                                                          | 17-20  |
| <i>Poteriocrinites</i> , Miller. 1821.....                                                                                                      | 20     |
| Subgenus ( <i>Dendrocrinus</i> ) Hall, 1852.....                                                                                                | 20     |
| <i>P. (Dendrocrinus) cincinnatiensis</i> , Meek, 1872, pl. iii bis, figs. 5 <i>a</i> , <i>b</i> .....                                           | 20-22  |
| <i>P. (Dendrocrinus) polydactylus</i> , Shumard, sp. 1867, pl. iii bis, fig. 9.....                                                             | 22     |
| <i>P. (Dendrocrinus) posticus</i> , Hall, 1872, pl. iii bis, figs. 4 <i>a-c</i> .....                                                           | 22-24  |
| <i>P. (Dendrocrinus) dyeri</i> , Meek, 1872, pl. iii bis, figs. 3 <i>a</i> , <i>b</i> .....                                                     | 24-25  |
| <i>P. (Dendrocrinus) caduceus</i> , Hall, 1866, pl. 3 bis, figs. i, <i>a-d</i> .....                                                            | 26-27  |
| <i>P. (Dendrocrinus) casei</i> , Meek, 1871, pl. iii bis, figs. 2 <i>a-c</i> .....                                                              | 28-30  |
| <i>Glyptocrinus</i> , Hall, 1847.....                                                                                                           | 30     |
| <i>G. decadactylus</i> , Hall, 1847, pl. ii, figs. 5 <i>a</i> , <i>b</i> .....                                                                  | 30-32  |
| <i>G. dyeri</i> , Meek, 1872, pl. ii, figs. <i>a</i> , <i>b</i> .....                                                                           | 32-34  |
| <i>G. dyeri</i> var. <i>sub-globosus</i> , Meek, 1872, pl. ii, fig. 2, <i>c</i> .....                                                           | 34     |
| <i>G. nealli</i> , Hall, 1866, pl. ii, figs. 3 <i>a-c</i> .....                                                                                 | 34-36  |
| <i>G. parvus</i> , Hall, 1872, pl. ii, figs. 4 <i>a</i> , <i>b</i> .....                                                                        | 36-37  |
| <i>G. bacri</i> , Meek, 1872, pl. ii, figs. 1 <i>a</i> , <i>b</i> .....                                                                         | 37-39  |

*Cystoidea.*

|                                                                                           |       |
|-------------------------------------------------------------------------------------------|-------|
| <i>Lepacrinites</i> , Conrad, 1840.....                                                   | 39    |
| <i>L. moorei</i> , Meek, 1871, pl. iii, figs. 4 <i>a-c</i> .....                          | 39-41 |
| <i>Anomalocystites</i> , Hall, 1859.....                                                  | 41    |
| <i>A. (Atleocystites?) balanoides</i> , Meek, 1872, pl. iii bis, figs. 6 <i>a-c</i> ..... | 41-44 |
| <i>Lichenocrinus</i> , Hall, 1866.....                                                    | 44-51 |
| <i>L. dyeri</i> , Hall, 1866, pl. iii, figs. 2 (and 3 <i>a</i> , <i>b</i> ?).....         | 51    |

|                                                                                                     | Page.   |
|-----------------------------------------------------------------------------------------------------|---------|
| <i>L. crateriformis</i> , Hall, 1866, pl. iii, figs. 1 <i>a-t</i> .....                             | 51-52   |
| <i>Hemicystites</i> , Hall.....                                                                     | 52      |
| <i>H. stellatus</i> , Hall, 1866, pl. iii, figs. 8 <i>a, b</i> .....                                | 52-54   |
| <i>H. (Cystaster) granulatus</i> , Hall, 1872, pl. iii, figs. 9 <i>a, b</i> .....                   | 54      |
| <i>Agelacrinites</i> , Vanuxem, 1842.....                                                           | 55      |
| <i>A. (Lepidodiscus) cincinnatiensis</i> , Reemer, 1851, pl. iii, figs. 6 <i>a, b</i> .....         | 55-56   |
| <i>A. pileus</i> , Hall, 1866, pl. iii, fig. 5.....                                                 | 56-57   |
| <i>A. vorticellata</i> , Hall, 1866, pl. iii, figs. 7 <i>a, b</i> .....                             | 57-58   |
| <b>Asterioidea.</b>                                                                                 |         |
| <i>Palaeaster</i> , Hall.....                                                                       | 58      |
| <i>P. ? dyeri</i> , Meek, 1872, pl. iv, figs. 2 <i>a-f</i> .....                                    | 58-60   |
| <i>P. granulosus</i> , Hall? 1866, pl. iv, figs. 3 <i>a-c</i> .....                                 | 60-61   |
| <i>P. ? jamesii</i> , Dana, 1863, pl. iv, fig. 4.....                                               | 62-64   |
| <i>P. incomptus</i> , Meek, 1872, pl. iv, figs. 5 <i>a, b</i> .....                                 | 64-65   |
| <i>P. shacferi</i> , Hall, 1868, pl. iv, fig. 1.....                                                | 66      |
| <i>Stenaster</i> Billings, 1858.....                                                                | 66      |
| <i>S. grandis</i> , Meek, 1872, pl. iii bis, fig. 7 <i>a-c</i> .....                                | 66-67   |
| <b>Ophiuroidea.</b>                                                                                 |         |
| <i>Protaster</i> ?, Forbes, 1849.....                                                               | 68      |
| <i>P. granuliferus</i> , Meek, 1872, pl. iii bis, figs. 8 <i>a, b</i> .....                         | 68-69   |
| <b>Mollusca.</b>                                                                                    |         |
| <b>Polysca.</b>                                                                                     |         |
| <i>Ptilodictya</i> , Lonsdale, 1839.....                                                            | 69      |
| <i>P. (Stictopora) shafferi</i> , Meek, 1872, pl. v, figs. 1 <i>a-c</i> .....                       | 69-70   |
| <b>Brachiopoda.</b>                                                                                 |         |
| <i>Leptaena</i> , Dalman, 1828.....                                                                 | 70      |
| <i>L. sericea</i> , Sowerby ? 1839, pl. v, figs. 3 <i>a-h</i> .....                                 | 70-72   |
| <i>Strophomena</i> , Rafinesque, 1827.....                                                          | 73-75   |
| <i>S. rhomboidalis</i> , Wilckens sp., 1769, pl. v, figs. 6 <i>a-e</i> .....                        | 75-77   |
| Subgenus <i>Hemipronites</i> , Pander.....                                                          | 77      |
| (Resupinate species.)                                                                               |         |
| <i>S. (Hemipronites) nutans</i> , James, 1871, pl. vi, figs. 1 <i>a-f</i> .....                     | 77-79   |
| <i>S. (Hemipronites) planumbona</i> , Hall, 1847, pl. vi, figs. 3 <i>a-h</i> .....                  | 79-81   |
| <i>S. (Hemipronites) plicata</i> , James, 1871, pl. vi, figs. 4 <i>a-h</i> .....                    | 81-82   |
| <i>S. (Hemipronites) plano-convexa</i> , Hall, 1847, pl. ii, figs. 2 <i>a-h</i> .....               | 82-83   |
| <i>S. (Hemipronites) filitexta</i> , Hall, 1847, pl. vi, figs. 5 <i>a-d</i> .....                   | 83-85   |
| <i>S. (Hemipronites) sulcata</i> , de Verneuil, 1848, pl. v, figs. 4 <i>a-e</i> .....               | 85-86   |
| <i>S. (Hemipronites) sinuata</i> , James, 1871, pl. v, figs. 5 <i>a-f</i> .....                     | 87-88   |
| (Non-resupinate species.)                                                                           |         |
| <i>S. (Hemipronites) alternata</i> (Conr.), Emmons, 1838, pl. vii, figs. 1 <i>a-g</i> .....         | 88-91   |
| <i>Orthis</i> , Dalman, 1828.....                                                                   | 92      |
| (Resupinate species.)                                                                               |         |
| <i>O. retrorsa</i> , Salter ? 1858, pl. xi, figs. 7 <i>a-e</i> .....                                | 92-94   |
| <i>O. subquadrata</i> , Hall, pl. ix, figs. 2 <i>b-g</i> .....                                      | 94-96   |
| <i>O. occidentalis</i> , Hall, 1847, pl. ix, figs. 3 <i>a-h</i> .....                               | 96-99   |
| <i>O. insculpta</i> , Hall, 1847, pl. ix, figs. 1 <i>a-h</i> .....                                  | 99-101  |
| <i>O. borealis</i> , Billings, 1859, pl. viii, figs. 4 <i>a-f</i> .....                             | 101-103 |
| <i>O. bellula</i> , James, 1871, pl. viii, figs. 5 <i>a-f</i> .....                                 | 103-104 |
| <i>O. (?) ella</i> , Hall, 1861, pl. viii, figs. 9 <i>a-d</i> .....                                 | 105-106 |
| (Non-resupinate species.)                                                                           |         |
| <i>O. fissicosta</i> , Hall, 1847, pl. viii, figs. 6 <i>a-h</i> .....                               | 106-107 |
| <i>O. plicatella</i> , Hall, 1847, pl. viii, figs. 7 <i>a-h</i> .....                               | 108-109 |
| <i>O. emacerata</i> , Hall, 1860, pl. viii, figs. 1 <i>a-d</i> , and figs. 2 <i>a-g</i> .....       | 109-111 |
| <i>O. emacerata</i> var. <i>multisecta</i> , James, 1871, pl. viii, figs. 3 <i>a-d</i> .....        | 112     |
| <i>O. (Platystrophia) biforata</i> , Schlottheim, sp., 1820, pl. x.....                             | 112-114 |
| Var. 1. <i>O. (Platystrophia) lynx</i> , Von Buch., pl. x, figs. 1 <i>a-e</i> .....                 | 114-116 |
| Var. 2. <i>O. (Platystrophia) laticosta</i> , James, 1871, pl. x, figs. 4 <i>a-f</i> .....          | 116-117 |
| Var. 3. <i>O. (Platystrophia) dentata</i> , Pander ? ? James, 1871, pl. x, figs. 3 <i>a-d</i> ..... | 117-119 |
| Var. 4. <i>O. (Platystrophia) acutilirata</i> , Con., sp., 1842, pl. x, figs. 5 <i>a-g</i> .....    | 119-121 |
| <i>Rhynchonella</i> , Fischer de Waldh., 1809.....                                                  | 121     |
| <i>R. dentata</i> , Hall, 1847, pl. xi, figs. 3 <i>a-d</i> .....                                    | 121-122 |
| <i>R. capax</i> , Conrad, sp., 1842, pl. xi, figs. 6 <i>a-f</i> .....                               | 123-124 |
| <i>Zugospira</i> , Hall, 1862.....                                                                  | 125     |
| <i>Z. modesta</i> , Say, sp., pl. xi, figs. 4 <i>a-d</i> .....                                      | 125-126 |
| <i>Z. cincinnatiensis</i> , James, 1871, pl. xi, figs. 5 <i>a-c</i> .....                           | 126     |



Page.

|                                                                                                    |         |
|----------------------------------------------------------------------------------------------------|---------|
| <i>Z. beadi</i> , Billings, sp., 1862, pl. xi, figs. 1 <i>a-d</i> .....                            | 127-128 |
| <i>Retzia</i> , King, 1850.....                                                                    | 128     |
| <i>R. (Trematospira) granulifera</i> , Meek, 1872, pl. xi, figs. 6 <i>a-c</i> .....                | 128-129 |
| <i>Pholidops</i> , Hall, 1860.....                                                                 | 130     |
| <i>P. cincinnatiensis</i> , Hall, 1872, pl. v, figs. 2 <i>a, b</i> .....                           | 130     |
| <i>Lamellibranchiata.</i>                                                                          |         |
| <i>Ambonychia</i> , Hall, 1847.....                                                                | 130     |
| <i>A. costata</i> , James, 1871, pl. xii, figs. 5 <i>a-c</i> .....                                 | 130-131 |
| <i>A. (Megaptera) alata</i> , Meek, 1872, pl. xi, fig. 9, and pl. xii, fig. 10.....                | 131-132 |
| <i>A. (Megaptera) casei</i> , M. & W. ?, 1866, pl. xi, fig. 8.....                                 | 133     |
| <i>Cypriocardites</i> , Conrad, 1841.....                                                          | 133     |
| <i>C. sterlingensis</i> , M. & W. ? sp., 1866, pl. xi, figs. 12 <i>a, b</i> .....                  | 133-135 |
| <i>C. ? carinata</i> , Meek, 1872, pl. xii, figs. 6 <i>a, b</i> .....                              | 135-136 |
| <i>Megambonia</i> , Hall, 1839.....                                                                | 136     |
| <i>M. jamesi</i> , Meek, 1871, pl. xii, figs. 9 <i>a, b</i> .....                                  | 136-138 |
| <i>Clidophorus</i> , Hall, 1847.....                                                               | 138     |
| <i>O. (Nuculites ?) fabula</i> , Hall, sp., 1845, pl. xi, figs. 10 <i>a, b</i> .....               | 138-139 |
| <i>Tellinomya</i> , Hall, 1847.....                                                                | 139     |
| <i>T. ? obliqua</i> , Hall, sp., 1845, pl. xi, figs. 11 <i>a-c</i> .....                           | 139     |
| <i>Anodontopsis</i> , McCoy, 1851.....                                                             | 140     |
| <i>A. ? mulleri</i> , Meek, 1871, pl. xii, figs. 1 <i>a-d</i> .....                                | 140-141 |
| <i>A. (Modiolopsis ?) unionoides</i> , Meek, 1871, pl. xii, figs. 2 <i>a, b</i> .....              | 141-142 |
| <i>Edgwickia</i> , McCoy, 1844.....                                                                | 142     |
| <i>S. ? Grammysia) neglecta</i> , Meek, 1872, pl. xii, fig. 8.....                                 | 142-143 |
| <i>S. ? fragilis</i> , Meek, 1872, pl. xii, figs. 3 <i>a, b</i> .....                              | 143-144 |
| <i>S. ? compressa</i> , Meek, 1872, pl. xii, figs. 7 <i>a, b</i> .....                             | 144-145 |
| <i>Cardiomorpha</i> , de Koninck, 1844.....                                                        | 146     |
| <i>O. ? obliquata</i> , Meek, 1872, pl. xii, figs. 4 <i>a, b</i> .....                             | 146-147 |
| <i>Gasteropoda.</i>                                                                                |         |
| <i>Cyrtolites</i> , Conrad, 1838.....                                                              | 147     |
| <i>C. (Microceras) inornatus</i> , Hall, sp., 1845, pl. xiii, figs. 4 <i>a, b</i> .....            | 147-148 |
| <i>C. ornatus</i> , Conrad, 1838, pl. xiii, figs. 3 <i>a, b</i> .....                              | 148-149 |
| <i>C. dyeri</i> , Hall, 1871, pl. xiii, figs. 2 <i>a-c</i> .....                                   | 149-150 |
| <i>C. ? costatus</i> , James, 1872, pl. xiii, figs. 1 <i>a-c</i> .....                             | 150     |
| <i>Cyclonema</i> , Hall, 1852.....                                                                 | 151     |
| <i>C. bilix</i> , Conrad sp., 1842, pl. xiii, figs. 5 <i>a, c, d, g</i> , and 5 <i>e, f</i> ?..... | 151-152 |
| <i>Cyclora</i> , Hall, 1845.....                                                                   | 152     |
| <i>C. minuta</i> , Hall, 1845, pl. xiii, figs. 7 <i>a-c</i> .....                                  | 152-153 |
| <i>C. ? parvula</i> , Hall, sp., 1845.....                                                         | 154     |
| <i>Pleurotomaria</i> , DeFrance, 1826.....                                                         | 154     |
| <i>P. (Scalites ?) tropidophora</i> , Meek, 1872, pl. xiii, figs. 6 <i>a-c</i> .....               | 154-155 |
| <i>Cephalopoda.</i>                                                                                |         |
| <i>Orthoceras</i> , Auct.                                                                          |         |
| <i>O. ortonii</i> , Meek, 1872, pl. xiii, fig. 8.....                                              | 155-156 |
| <i>Trochoceras</i> , Barrande, 1847.....                                                           | 157     |
| <i>T. ? baeri</i> , M. & W., 1865, pl. xiii, fig. 9.....                                           | 157-158 |
| <i>Articulata.</i>                                                                                 |         |
| <i>Crustacea.</i>                                                                                  |         |
| <i>Entomostraca.</i>                                                                               |         |
| <i>Cythere</i> , Muller, 1785.....                                                                 | 158     |
| <i>C. cincinnatiensis</i> , Meek, 1872, pl. xiv, figs. 1 <i>a-d</i> .....                          | 158-159 |
| <i>Asaphus</i> , Brongniart, 1822.....                                                             | 159     |
| <i>A. (Isotelus) megistos</i> , Locke ? 1842, pl. xiv, fig. 13.....                                | 159-160 |
| <i>Proetus</i> , Steininger, 1831.....                                                             |         |
| <i>P. spurlocki</i> , Meek, 1872, pl. xiv, fig. 12.....                                            | 161-162 |
| <i>Ceraurus</i> , Green, 1833.....                                                                 | 622     |
| <i>C. icarus</i> , Billings, 1859, pl. xiv, figs. 11 <i>a-c</i> .....                              | 162-165 |
| <i>Acidaspis</i> , Murchison, 1839.....                                                            | 165     |
| <i>A. crosotus</i> , Locke, ? 1842, pl. xiv, figs. 10 <i>a, b</i> .....                            | 165-167 |
| <i>A. cincinnatiensis</i> , Meek, n. sp., 1873, pl. xiv, fig. 3.....                               | 167-169 |
| <i>A. ceralepta</i> , Anthony, sp.?, 1838, pl. xiv, figs. 8, 9.....                                | 169-170 |
| <i>Dalmanites</i> , Barrande, 1852.....                                                            | 170     |
| <i>D. carlyi</i> , Meek, 1872, pl. xiv, figs. 2 <i>a-d</i> .....                                   | 170-173 |
| <i>Calymene</i> , Brongniart, 1822.....                                                            | 173     |
| <i>C. senaria</i> , Conrad, 1841, pl. xiv, figs. 14 <i>a-f</i> .....                               | 173-175 |



## FOSSILS OF THE NIAGARA AND CLINTON GROUPS.

|                                                                                                                           | Page.   |
|---------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                                                                          |         |
| <i>Brachiopoda.</i>                                                                                                       |         |
| <i>Triplexia</i> , Hall, 1859 .....                                                                                       | 176-177 |
| <i>T. ortonii</i> , Meek, 1872, pl. xv, figs. 1 <i>a-k</i> .....                                                          | 178-179 |
| <i>Rhynchonella</i> , Fischer, 1809 .....                                                                                 | 179     |
| <i>R. neglecta</i> , Hall, 1852, pl. xv, figs. 3 <i>a-d</i> .....                                                         | 179-180 |
| <i>Meristella</i> , Hall, 1860 .....                                                                                      | 180     |
| <i>M. ? (Meristina) cylindrica</i> , Hall, sp., 1852, pl. xv, figs. 2 <i>a-d</i> .....                                    | 180-182 |
| <i>Trimerella</i> , Billings, 1862 .....                                                                                  | 182     |
| <i>T. grandis</i> , Billings, 1862, pl. xvi, figs. 2 <i>a, b</i> .....                                                    | 182     |
| <i>T. ohioensis</i> , Meek, 1871, pl. xvi, figs. 1 <i>a-c</i> , and figs. <i>a, b</i> , p. 183 .....                      | 183-185 |
| <i>Gasteropoda.</i>                                                                                                       |         |
| <i>Platystoma</i> , Conrad, 1842 .....                                                                                    | 185     |
| <i>P. niagarensis</i> var. <i>trigonostoma</i> , pl. xvi, figs. 3 <i>a-c</i> , and fig. p. 186 .....                      | 185-186 |
| <i>Cephalopoda.</i>                                                                                                       |         |
| <i>Lituites</i> , Montfort, 1808 .....                                                                                    | 186     |
| <i>L. ? ortonii</i> , Meek, n. s., 1873, pl. xv, fig. 4 .....                                                             | 186-187 |
| <i>Articulata.</i>                                                                                                        |         |
| <i>Crustacea.</i>                                                                                                         |         |
| <i>Leperditia</i> , Rouault, 1851 .....                                                                                   | 187     |
| <i>L. alta</i> , Conrad, sp., 1843, pl. xvii, figs. 2 <i>a, b</i> .....                                                   | 187-188 |
| <i>Illeenus</i> , Dalman, 1826 .....                                                                                      | 189     |
| <i>I. (Bumastus) insignis</i> , Hall, ? 1864, pl. xv, figs. 5 <i>a-c</i> , and figs. <i>a</i> and <i>b</i> , p. 189 ..... | 189-193 |
| FOSSILS OF THE CORNIFEROUS GROUP.                                                                                         |         |
| <i>Mollusca.</i>                                                                                                          |         |
| <i>Polyzoa.</i>                                                                                                           |         |
| <i>Ptilodictya</i> , Lonsdale, 1839 .....                                                                                 | 194     |
| <i>P. (Stictopora) gilberti</i> , Meek, 1871, pl. xviii, figs. 1 <i>a-c</i> .....                                         | 194-195 |
| <i>Brachiopoda.</i>                                                                                                       |         |
| <i>Rhynchonella</i> , Fischer, 1809 .....                                                                                 | 196     |
| <i>R. carolina</i> , Hall, 1867, pl. xviii, figs. 8 <i>a-e</i> .....                                                      | 196-197 |
| <i>Lamellibranchiata.</i>                                                                                                 |         |
| <i>Aviculopecten</i> , McCoy, 1851 .....                                                                                  | 197     |
| <i>A. parilis</i> , Conrad, ? 1842, pl. xviii, figs. 6 <i>a, b</i> .....                                                  | 197-199 |
| <i>Lucina</i> , Bruguiere, 1792 .....                                                                                     | 199     |
| <i>L. (Paracyclas) ohioensis</i> , Meek, 1871, pl. xviii, fig. 7 <i>a, b</i> .....                                        | 199-200 |
| <i>L. lirata</i> , Conrad, sp., fig. —, p. 200 .....                                                                      | 200     |
| <i>Conocardium</i> , Brown, 1835. ? .....                                                                                 | 201     |
| <i>C. trigonale</i> , Hall, 1843, figs. A-C, p. 201, and figs. A, B, p. 204 .....                                         | 201-203 |
| <i>C. ohioense</i> , Meek, 1871, pl. xviii, fig. 9, and figs. A and B, p. 204 .....                                       | 203-206 |
| <i>Solemya</i> , Lamarck, 1818 .....                                                                                      | 206     |
| <i>S. (Janeia) vetusta</i> , Meek, 1871, pl. xviii, fig. 4 .....                                                          | 206-207 |
| <i>Olinopistha</i> , M. and W., 1870 .....                                                                                | 208     |
| <i>O. antiqua</i> , Meek, 1871, pl. xviii, figs. 5 <i>a, b</i> .....                                                      | 208     |
| <i>Sanguinolites</i> , McCoy, 1844 .....                                                                                  | 209     |
| <i>S. ? sanduskyensis</i> , Meek, 1871, pl. xviii, fig. 3 .....                                                           | 209     |
| <i>Gasteropoda.</i>                                                                                                       |         |
| <i>Platyceras</i> , Conrad, 1842 .....                                                                                    | 210     |
| <i>P. multispinosum</i> , Meek, 1871, pl. xx, figs. 7 <i>a, b</i> .....                                                   | 210-211 |
| <i>P. dumosum</i> var. <i>attenuatum</i> , Meek, 1871, pl. xx, figs. 2 <i>a, b</i> .....                                  | 212-213 |
| <i>Cyclonema</i> , Hall, 1852 .....                                                                                       | 213     |
| <i>C. crenulata</i> , Meek, 1871, pl. xix, figs. 2 <i>a-d</i> .....                                                       | 213     |
| <i>Naticopsis</i> , McCoy, 1844 .....                                                                                     | 214     |
| <i>N. ? (Isonema) humilis</i> , Meek, 1871, pl. xix, figs. 1 <i>a-c</i> , and fig. p. 215 .....                           | 214-215 |
| <i>N. levis</i> , Meek, 1871, pl. xix, figs. 4 <i>a, b</i> .....                                                          | 215-216 |
| <i>N. acquistriata</i> , Meek, n. s., 1873, figs. <i>a, b</i> , p. 216 .....                                              | 216-217 |
| <i>Orthonema</i> , M. and W., 1861 .....                                                                                  | 217     |
| <i>O. newberryi</i> , Meek, 1871, pl. xx, figs. 3 <i>a, b</i> .....                                                       | 217-218 |
| <i>Trochonema</i> , Salter, 1859 .....                                                                                    | 218     |
| <i>T. tricarinata</i> , Meek, 1871, pl. xix, figs. 5 <i>a, b</i> .....                                                    | 218-219 |
| <i>Eumphalus</i> , Sowerby, 1814 .....                                                                                    | 220     |
| <i>E. decevi</i> , Billings, 1861, pl. xix, figs. 3 <i>a, b</i> , and pl. xx, fig. 1 .....                                | 220-221 |
| <i>Xenophora</i> , Fischer, 1806 .....                                                                                    | 221     |
| <i>X. ? (Pseudophorus) antiqua</i> , Meek, 1871, pl. xvii, figs. 1 <i>a-e</i> .....                                       | 221-222 |

|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Bellerophon</i> , Montfort, 1808 .....                                  | 222     |
| <i>B. newberryi</i> , Meek, 1871, pl. xx, fig. 5, and fig. —, p. 223 ..... | 222-225 |
| <i>B. patulus</i> , Hall, fig. —, p. 223 .....                             | 223     |
| <i>B. propinquus</i> , Meek, 1871, pl. xx, figs. 4 a-b .....               | 226     |
| <i>Pleurotomaria</i> , DeFrance, 1826 .....                                | 226     |
| <i>P. lucina</i> , Hall?, 1862, pl. xx, fig. 6 .....                       | 226-227 |
| <i>Conularia</i> , Miller, 1818, MS. ....                                  | 228     |
| <i>C. elegantula</i> , Meek, 1871, pl. xxiii, fig. 4 .....                 | 228-229 |
| <i>Cephalopoda.</i>                                                        |         |
| <i>Cyrtoceratites</i> , Goldfuss, 1830? .....                              | 229     |
| <i>C. ohioensis</i> , Meek, 1871, pl. xxiii, figs. 2 and 2 b .....         | 229-230 |
| <i>Gyroceratites</i> , Meyer, 1831 .....                                   | 230     |
| <i>G. (? Trochoceras) ohioensis</i> , Meek, 1871, pl. xxii .....           | 230-231 |
| <i>G. (? Nautilus) inelegans</i> , Meek, pl. xxi .....                     | 232     |
| <i>Articulata.</i>                                                         |         |
| <i>Crustacea.</i>                                                          |         |
| <i>Proetus</i> , Steininger, 1831 .....                                    | 233     |
| <i>P. planimarginatus</i> , Meek, 1871, pl. xxiii, figs. 3 a, b .....      | 233-234 |
| <i>Dalmanites</i> , Barrande, 1852 .....                                   | 234     |
| <i>D. ohioensis</i> , Meek, 1871, pl. xxiii, fig. 1 .....                  | 234-236 |

91.

MEEK, F. B., and WORTHEN, A. H. Paleontology. Descriptions of Invertebrates from the Carboniferous System. <Geological Survey of Illinois, vol. v, pp. 323-619, pls. i-xxxii. 1873. Springfield, 1873.

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LOWER CARBONIFEROUS SPECIES.

FOSSILS OF THE BURLINGTON GROUP.

|                                                                                               | Page.   |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Echinodermata</i> .....                                                                    | 323     |
| Notes on the structure and habits of the Palaeozoic Crinoidea .....                           | 323     |
| <i>Symbathocrinus</i> , Phillips .....                                                        | 324     |
| <i>Goniatoidocrinus</i> , Lyon & Casseday .....                                               | 324-325 |
| <i>Cyathocrinus</i> , Miller .....                                                            | 325-327 |
| Convolute support of the digestive sack in the <i>Actinocrinidae</i> .....                    | 327-329 |
| Ambulacral canals passing under the vault in the <i>Actinocrinidae</i> .....                  | 329-339 |
| <i>Actinocrinites</i> , Miller .....                                                          | 339-341 |
| <i>Actinocrinites</i> . Section (a) .....                                                     | 342     |
| <i>A. penicillus</i> , M. & W., 1869, pl. viii, fig. 2 .....                                  | 342-343 |
| <i>A. sculptus</i> , Hall, 1858, pl. iv, fig. 2 .....                                         | 343     |
| <i>A. delicatus</i> , M. & W., 1869, pl. viii, fig. 2 .....                                   | 343-345 |
| <i>Actinocrinites</i> . Section (b) .....                                                     | 345     |
| <i>A. longus</i> , M. & W., 1869, pl. viii, fig. 1 .....                                      | 345-347 |
| <i>Strotocrinus</i> , M. & W., 1866 .....                                                     | 347-349 |
| <i>S. ? asperimus</i> , M. & W., 1869, pl. viii, fig. 3 .....                                 | 349-351 |
| Subgenus <i>Physetocrinus</i> , M. & W. ....                                                  | 351     |
| <i>S. (Physetocrinus ?) asper</i> , M. & W., 1869, pl. vii, fig. 1. Section (b), p. 253. .... | 351-353 |
| <i>S. ectypus</i> , M. & W., 1869, pl. vii, fig. 5 .....                                      | 353-355 |
| <i>S. liratus</i> , Hall, sp., 1860, pl. vii, fig. 2 .....                                    | 355-357 |
| <i>S. perumbrosus</i> , Hall, sp., 1860, pl. viii, fig. 4 .....                               | 357-360 |
| <i>S. umbrosus</i> , Hall, sp., 1858, pl. viii, fig. 5 .....                                  | 360-362 |
| <i>S. (Physetocrinus) dilatatus</i> , M. & W., 1869, pl. x, fig. 6 .....                      | 363-364 |
| <i>Batocrinus</i> , Casseday .....                                                            | 364-368 |
| <i>B. quasillus</i> , M. & W., 1869, pl. v, fig. 2 .....                                      | 369-370 |
| <i>B. (Eretmocrinus) remibrachiatus</i> , Hall's sp., 1861, pl. x, fig. 5 .....               | 370     |
| <i>B. cassedayanus</i> , M. & W., 1868, pl. v, fig. 1 .....                                   | 370-372 |
| <i>B. trochiscus</i> , M. & W., 1868, pl. v, fig. 6 .....                                     | 372-374 |
| <i>B. pyriformis</i> , Shumard sp., 1855, pl. v, fig. 5 .....                                 | 375-377 |
| <i>B. (Eretmocrinus ?) neglectus</i> , M. & W., 1868, pl. v, fig. 3 .....                     | 377-379 |
| <i>B. christyi</i> , Shumard's sp., pl. v, fig. 4 .....                                       | 379     |

|                                                                                    | Page.   |
|------------------------------------------------------------------------------------|---------|
| <i>B. verneuilianus</i> , Shum. sp., 1855, pl. iv, figs. 3 and 4.....              | 379     |
| <i>Dorycrinus</i> , Rœmer.....                                                     | 379-380 |
| <i>D. canaliculatus</i> , M. & W., 1869, pl. vi, fig. 4.....                       | 381-383 |
| <i>D. unicornis</i> , O. & S., sp., 1850, pl. vi, fig. 2.....                      | 383     |
| <i>D. rœmeri</i> , M. & W., 1868, pl. 10, fig. 3.....                              | 383-385 |
| <i>D. quinquelobus</i> var. <i>intermedius</i> , M. & W., 1868, pl. x, fig. 4..... | 385-386 |
| <i>Amphoracrinus</i> , Austin.....                                                 | 386-388 |
| <i>A. divergens</i> , Hall, sp., 1860, pl. vi, fig. 6.....                         | 388-389 |
| <i>A. ? spinobrachiatus</i> , Hall, sp., 1860, pl. vi, fig. 5.....                 | 389     |
| <i>Gilbertsocrinus</i> , Phillips.....                                             | 389     |
| Subgenus <i>Goniasteroidocrinus</i> , Lyon & Casseday, 1859.....                   | 389     |
| <i>G. (Goniasteroidocrinus) tenuiradiatus</i> , M. & W., 1869, pl. xi, fig. 1..... | 389-390 |
| <i>G. (Goniasteroidocrinus) obovatus</i> , M. & W., 1868, pl. iv, fig. 6.....      | 391-392 |
| <i>Megistocrinus</i> , O. & S., 1850.....                                          | 393-396 |
| <i>M. parvirostris</i> , M. & W., 1869, pl. vi, fig. 7.....                        | 396-397 |
| <i>M. (Saccocrinus) whitei</i> , Hall, 1861, pl. vi, fig. 1.....                   | 397     |
| <i>Agaricocrinus</i> , Troost.....                                                 | 397     |
| <i>A. nodosus</i> , M. & W., 1869, pl. x, fig. 7.....                              | 397-399 |
| <i>Tazocrinus</i> , Phillips, 1843.....                                            | 399     |
| <i>T. thiemei</i> , Hall, sp., 1861, pl. iv, fig. 1.....                           | 399     |
| <i>Cyathocrinites</i> , Miller, 1821.....                                          | 400-401 |
| <i>C. sculptilis</i> , Hall, pl. iv, fig. 5.....                                   | 401     |
| <i>C. fragilis</i> , M. & W., 1868, pl. ii, fig. 14.....                           | 401-403 |
| <i>C. tenuidactylus</i> , M. & W., 1868, pl. ii, fig. 15.....                      | 403-405 |
| <i>Potriocrinites</i> , Miller.....                                                | 405     |
| <i>P. ? perplexus</i> , M. & W., 1869, pl. ii, fig. 12.....                        | 405-406 |
| <i>Scaphiocrinus</i> , Hall.....                                                   | 407     |
| <i>S. delicatus</i> , M. & W., 1869, pl. i, fig. 5.....                            | 407-408 |
| <i>S. elio</i> , M. & W., 1869, pl. i, fig. 10.....                                | 408-409 |
| <i>S. notabilis</i> , M. & W., 1869, pl. i, fig. 9.....                            | 410-412 |
| <i>S. rudis</i> , M. & W., 1869, pl. i, fig. 1.....                                | 412-413 |
| <i>S. penicillus</i> , M. & W., 1869, pl. ii, fig. 7.....                          | 414-415 |
| <i>S. macrodactylus</i> , M. & W., 1869, pl. ii, fig. 9.....                       | 415-416 |
| <i>S. juvenis</i> , M. & W., 1869, pl. ii, fig. 8.....                             | 417-418 |
| <i>S. striatus</i> , M. & W., 1869, pl. ii, fig. 11.....                           | 418-419 |
| <i>S. tethys</i> , M. & W., 1869, pl. ii, fig. 13.....                             | 419-421 |
| <i>S. scalaris</i> , M. & W., 1869, pl. ii, fig. 10.....                           | 421-423 |
| <i>S. nanus</i> , M. & W., 1869, pl. i, fig. 8.....                                | 423-424 |
| <i>S. fiscellus</i> , M. & W., 1869, pl. i, fig. 3.....                            | 424-426 |
| Subgenus <i>Zeacrinus</i> .....                                                    | 426     |
| <i>S. (Zeacrinus) scobina</i> , M. & W., 1869, pl. i, fig. 2.....                  | 426-428 |
| <i>S. (Zeacrinus) serratus</i> , M. & W., 1869, pl. i, fig. 6.....                 | 428-430 |
| <i>S. (Zeacrinus) asper</i> , M. & W., 1869, pl. i, fig. 7.....                    | 430-432 |
| <i>S. (Zeacrinus) lyra</i> , M. & W., 1869, pl. i, fig. 11.....                    | 432-433 |
| <i>Nipterocrinus</i> , Wachsmuth.....                                              | 434-435 |
| <i>N. wachsmuthi</i> , M. & W., 1868, pl. ii, fig. 4.....                          | 435-436 |
| <i>N. arboreus</i> , Worthen MSS., pl. iv, fig. 8.....                             | 436-437 |
| <i>Synbathocrinus</i> , Phillips, 1836.....                                        | 437     |
| <i>S. wachsmuthi</i> , M. & W., 1869, pl. ii, fig. 5.....                          | 437-439 |
| <i>S. brevis</i> , M. & W., 1869, pl. ii, fig. 6.....                              | 439     |
| <i>Dichocrinus</i> , Munster, 1839.....                                            | 440     |
| <i>D. lineatus</i> , M. & W., 1869, pl. iii, fig. 1.....                           | 440-441 |
| <i>D. pisum</i> , M. & W., 1869, pl. iii, fig. 2.....                              | 441-442 |
| <i>Calceocrinus</i> , Hall, 1852.....                                              | 442-443 |
| <i>C. ? wachsmuthi</i> , M. & W., 1869, pl. ii, fig. 1.....                        | 444-445 |
| <i>Erisocrinus</i> , M. & W., 1865.....                                            | 445-447 |
| <i>E. antiquus</i> , M. & W., 1869, pl. ii, fig. 3.....                            | 447-448 |
| <i>E. whitei</i> , M. & W., 1869, pl. ii, fig. 2.....                              | 448-449 |
| <i>Platycrinites</i> , Miller.....                                                 | 450     |
| <i>P. tenuibrachiatus</i> , M. & W., 1869, pl. iii, fig. 4.....                    | 450-452 |
| <i>P. planus</i> , O. & S., 1852, pl. iii, fig. 5.....                             | 452     |
| <i>P. subspinosus</i> , Hall, 1858, pl. ii, fig. 2.....                            | 452     |
| <i>P. burlingtonensis</i> , O. & S., 1850, pl. iii, fig. 6.....                    | 452-454 |
| <i>P. halli</i> , Shumard? 1866, pl. iii, fig. 3.....                              | 454-456 |
| <i>P. æqualis</i> , Hall, 1861, pl. iii, fig. 8.....                               | 456-458 |



|                                                                    | Page.   |
|--------------------------------------------------------------------|---------|
| <i>P. incomptus</i> , White, 1863, pl. iii, fig. 7                 | 459-461 |
| <i>Pentremites</i> , Say                                           | 461     |
| <i>P. burlingtonensis</i> , M. & W., 1869, pl. viii, fig. 7        | 461-462 |
| <i>Codmites</i> , M. & W., 1869                                    | 463-464 |
| <i>C. stelliformis</i> , O. & S., sp., 1850, pl. ix, fig. 5, 5a, b | 464-466 |
| <i>C. gracilis</i> , n. s., M. & W., 1873, pl. viii, fig. 6        | 466-468 |
| <i>Granatocrinus</i> , Troost                                      | 468     |
| <i>G. melonoides</i> , M. & W., 1869, pl. ix, fig. 1               | 468-470 |
| <i>G. pisum</i> , M. & W., 1869, pl. ix, fig. 4                    | 470-471 |
| <i>G. neglectus</i> , M. & W., 1869, pl. ix, fig. 3                | 471-473 |
| <i>G. norwoodi</i> , O. & S., sp., 1850, pl. ix, fig. 2            | 473     |
| <i>Palæochinus</i> , McCoy                                         | 473     |
| <i>P. gracilis</i> , M. & W., 1869, pl. x, fig. 2                  | 473-474 |
| <i>Onychaster</i> , M. & W.                                        | 474-475 |
| <i>O. barrisi</i> , Hall, sp., 1861, pl. x, fig. 1                 | 476     |
| <i>Oligoporus</i> , Meek & Worthen                                 | 476     |
| <i>O. nobilis</i> , M. & W., 1868, pl. xi, fig. 3                  | 476-478 |
| <i>Ecoidaris</i>                                                   | 478     |
| <i>E. ? squamosus</i> , M. & W., 1869, pl. ix, fig. 15             | 478-482 |

FOSSILS OF THE KEOKUK GROUP.

|                                                                                  |         |
|----------------------------------------------------------------------------------|---------|
| <i>Barycrinus</i> , Wachs                                                        | 483     |
| <i>B. magnificus</i> , M. & W., 1868, pl. xii, fig. 2                            | 483-485 |
| <i>B. geometricus</i> , M. & W., pl. xii, fig. 3                                 | 485     |
| <i>B. hoveyi</i> , var. <i>hirculeus</i> , M. & W., 1868, pl. xiii, fig. 2       | 485-486 |
| <i>B. hoveyi</i> , Hall, sp., 1861, pl. xiii, fig. 1                             | 486     |
| <i>B. mammatus</i> , Worthen MSS., pl. xv, fig. 4                                | 486     |
| <i>B. pentagonus</i> , Worthen MSS., pl. xv, fig. 3                              | 487     |
| <i>B. subtumidus</i> , M. & W., pl. xiii, fig. 3                                 | 487-488 |
| <i>Cyathocrinites ? poterium</i> , M. & W., 1870, pl. xii, fig. 4                | 489-490 |
| <i>Poteriocrinites</i>                                                           | 490     |
| <i>P. (Zeacrinus ?) concinnus</i> , M. & W., 1870, pl. xiv, fig. 3               | 490-492 |
| Subgenus <i>Scaphiocrinus</i>                                                    | 492     |
| <i>P. (Scaphiocrinus) depressus</i> , M. & W., 1870, pl. xiv, fig. 8             | 492-493 |
| <i>P. (Scaphiocrinus) unicus</i> , Hall, 1861, pl. xv, fig. 5                    | 493     |
| <i>P. (Scaphiocrinus) aequalis</i> , Hall, 1861, pl. xv, fig. 6                  | 494     |
| <i>P. (Scaphiocrinus) coreyi</i> , M. & W., 1869, pl. xv, fig. 1                 | 494-495 |
| <i>P. (Scaphiocrinus) meadamsi</i> , Worthen MSS., pl. xv, fig. 2                | 495-496 |
| <i>Forbesiocrinus wortheni</i> , Hall, 1858, pl. xiv, fig. 2, and pl. xv, fig. 7 | 496-498 |
| <i>Onychocrinus exculptus</i> , L. & C., 1859, pl. xiv, fig. 4                   | 498     |
| <i>Agaricocrinus</i> , Troost                                                    | 499     |
| <i>A. whitfieldi</i> , Hall, 1868, pl. xii, figs. 1 a, b, and pl. xv, fig. 8     | 499-500 |
| <i>Dichoerinus</i> , Munster                                                     | 500     |
| <i>D. expansus</i> , M. & W., 1868, pl. xiv, fig. 1                              | 500-502 |
| <i>D. ficus</i> , C. & L., 1860, pl. xiv, fig. 5                                 | 502     |
| <i>Calceocrinus</i> , Hall                                                       | 502     |
| <i>C. bradleyi</i> , M. & W., 1869, pl. xiv, fig. 9                              | 502-504 |
| <i>Catillocrinus</i> , Troost                                                    | 504     |
| <i>C. bradleyi</i> , M. & W., 1868, pl. xiv, fig. 10                             | 504-505 |
| <i>Platycrinites</i>                                                             | 506     |
| <i>P. hemisphericus</i> , M. & W., 1865, pl. xvi, figs. 6 a-c                    | 506     |
| <i>Pentremites</i>                                                               | 506     |
| <i>P. wortheni</i> , Hall ? 1858, pl. xiv, fig. 11                               | 506     |
| <i>P. (Troostocrinus ?) woodmani</i> , M. & W., 1868, pl. xvi, fig. 4            | 506-508 |
| <i>Granatocrinus</i>                                                             | 508     |
| <i>G. granulosus</i> , M. & W., 1865, pl. xv, fig. 10                            | 508-509 |
| <i>Protaster</i> , Forbes                                                        | 509     |
| <i>P. ? gregarius</i> , M. & W., 1869, pl. xvi, fig. 5                           | 509-510 |
| <i>Onychaster</i> , M. & W.                                                      | 510     |
| <i>O. flexilis</i> , M. & W., pl. xvi, fig. 3                                    | 510     |
| <i>Pholidocidaris</i> , M. & W., 1869                                            | 510-511 |
| <i>P. irregularis</i> , M. & W., 1869, pl. xv, fig. 9                            | 512-513 |
| <i>Agelacrinites</i> , Vannuxem                                                  | 513     |
| <i>A. (Lepidodiscus) squamosus</i> , M. & W., 1868, pl. xvi, fig. 1              | 513-515 |



|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                           |         |
| <i>Gastropoda.</i>                                                         |         |
| <i>Platyceras</i> , Conrad .....                                           | 516     |
| <i>P. unicum</i> , M. & W., 1866, pl. xvii, fig. 1.....                    | 516-517 |
| <i>P. infundibulum</i> , M. & W., 1866, pl. xvii, fig. 3 .....             | 517-518 |
| <i>P. equilatera</i> , Hall, 1860, pl. xvii, fig. 2.....                   | 518-519 |
| <i>P. fissurella</i> , Hall, 1859, pl. xvii, fig. 4 .....                  | 519-520 |
| <i>Pteropoda.</i>                                                          |         |
| <i>Conularia.</i>                                                          |         |
| <i>Conularia subcarbonaria</i> , M. & W., 1865, pl. xix, fig. 4 .....      | 520-522 |
| <i>Cephalopoda.</i>                                                        |         |
| <i>Nautilus</i> , Linn .....                                               | 522     |
| <i>N. (Discites) disciformis</i> , M. & W., 1865, pl. xviii, fig. 1 .....  | 522-523 |
| <i>N. (Temnocheilus) niotensis</i> , M. & W., 1865, pl. xix, fig. 3 .....  | 523-524 |
| <i>N. (Solenoccheilus) leidyi</i> , M. & W., 1865, pl. xviii, fig. 2 ..... | 524-525 |
| <i>Articulata.</i>                                                         |         |
| <i>Phillipsia</i> , Portlock.....                                          | 525     |
| <i>P. (Griffithides) portlockii</i> , M. & W., 1865, pl. xix, fig. 6 ..... | 525-528 |
| <i>P. (Griffithides) bufo</i> , M. & W., 1870, pl. xv, fig. 10.....        | 528-529 |

## FOSSILS OF THE SAINT LOUIS GROUP.

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| <i>Echinodermata.</i>                                                    |         |
| <i>Barycrinus</i> .....                                                  | 530     |
| <i>B. spectabilis</i> , M. & W., 1869, pl. xx, fig. 8 .....              | 530-533 |
| <i>Poteriocrinites</i> .....                                             | 533     |
| <i>P. hardinensis</i> , Worthen MSS., pl. xx, fig. 10 .....              | 533     |
| Subgenus <i>Scaphiocrinus</i> .....                                      | 534     |
| <i>P. (Scaphiocrinus) huntsvillæ</i> , Worthen MSS., pl. xx, fig. 1..... | 534     |
| Subgenus <i>Zeacrinus</i> .....                                          | 534     |
| <i>P. (Zeacrinus) arboreus</i> , Worthen MSS., pl. xx, fig. 5 .....      | 534-535 |
| <i>P. (Zeacrinus) cariniferous</i> , Worthen MSS., pl. xx, fig. 4 .....  | 535-536 |
| <i>P. (Zeacrinus) compactilis</i> , Worthen MSS., pl. xxi, fig. 5 .....  | 536-537 |
| <i>Diclocrinus</i> , Munster .....                                       | 537     |
| <i>D. cornigerus</i> , Shumard ? 1860, pl. xx, fig. 6 .....              | 537     |
| <i>Granatocrinus</i> .....                                               | 537     |
| <i>G. glaber</i> , M. & W., 1869, pl. xx, fig. 11 .....                  | 537-539 |

*Mollusca.**Lamellibranchiata.*

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| <i>Lithophaga ? pertenuis</i> , M. & W., 1865, pl. xxii, fig. 1..... | 539-540 |
| <i>Myalina</i> .....                                                 | 540     |
| <i>M. St. ludovici</i> , Worthen MSS., pl. xxii, fig. 3 .....        | 540     |
| <i>Chonomya</i> , M. & W .....                                       | 540     |
| <i>C. ? rhomboidea</i> , M. & W., 1865, pl. xxii, fig. 4 .....       | 540-541 |

*Pteropoda.*

|                                                                 |         |
|-----------------------------------------------------------------|---------|
| <i>Conularia</i> .....                                          | 541     |
| <i>C. missouriensis</i> , Swallow ? 1860, pl. xxii, fig. 5..... | 541-542 |

*Cephalopoda.*

|                                                                                      |         |
|--------------------------------------------------------------------------------------|---------|
| <i>Nautilus</i> .....                                                                | 543     |
| <i>N. (Temnocheilus) coxanus</i> , M. & W., 1869, pl. xxiii, fig. 1 .....            | 543-544 |
| <i>N. (Solenoccheilus) collectus</i> , M. & W., 1870, pl. xxiii, figs. 3 and 4 ..... | 544-545 |

## FOSSILS OF THE CHESTER GROUP.

*Echinodermata.*

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Poteriocrinites</i> .....                                                   | 546     |
| <i>P. bisselli</i> , Worthen MSS., pl. xxi, fig. 4 .....                       | 546-547 |
| Subgenus <i>Zeacrinus</i> .....                                                | 547     |
| <i>P. (Zeacrinus ?) armiger</i> , M. & W., 1870, pl. xxi, fig. 3.....          | 547-548 |
| <i>P. (Zeacrinus) subtunidus</i> , Worthen MSS., pl. xxi, fig. 1.....          | 548-549 |
| <i>P. (Zeacrinus) formosus</i> , Worthen MSS., pl. xxi, fig. 2 .....           | 549     |
| Subgenus <i>Scaphiocrinus</i> .....                                            | 550     |
| <i>P. (Scaphiocrinus) bayensis</i> , M. & W., 1865, pl. xx, fig. 2.....        | 550-551 |
| <i>P. (Scaphiocrinus) randolphensis</i> , Worthen MSS., pl. xxi, fig. 14 ..... | 551-552 |
| <i>Onychocrinus</i> .....                                                      | 552     |
| <i>O. whitfieldi</i> , Hall sp., 1858, pl. xx, fig. 3 .....                    | 552-554 |
| <i>Eupuchocrinus</i> .....                                                     | 554     |

|                                                             | Page    |
|-------------------------------------------------------------|---------|
| <i>E. boydii</i> , M. & W., 1870, pl. xxi, fig. 6.....      | 554-555 |
| <i>Platycrinites</i> .....                                  | 555     |
| <i>P. parvulus</i> , M. & W., 1865, pl. xx, fig. 7.....     | 555-556 |
| <i>Agassizocrinus</i> .....                                 | 556     |
| <i>A. pentagonus</i> , Worthen MSS., pl. xxi, fig. 10.....  | 556-557 |
| <i>A. conicus</i> , O. & S., 1851, pl. xxi, fig. 8.....     | 557     |
| <i>A. gibbosus</i> , Worthen MSS., pl. xxi, fig. 12.....    | 557-558 |
| <i>A. gibbosus</i> , Hall, 1858, pl. xxi, fig. 11.....      | 558     |
| <i>A. chesterensis</i> , Worthen MSS., pl. xxi, fig. 9..... | 558     |
| <i>Pterotocrinus</i> , L. & C.....                          | 559     |
| <i>P. depressus</i> , L. & C.? 1860, pl. xxi, fig. 13.....  | 559     |
| <i>Graphiocrinus</i> .....                                  | 559     |
| <i>G. dactylus</i> , Hall, 1860, pl. xx, fig. 9.....        | 559     |

FOSSILS OF THE COAL-MEASURES.

Foraminifera.

|                                                             |     |
|-------------------------------------------------------------|-----|
| <i>Fusulina</i> , Fischer.....                              | 560 |
| <i>F. gracilis</i> , Meek ? 1864, pl. xxiv, fig. 7.....     | 560 |
| <i>F. ventricosa</i> , M. & H., 1864, pl. xxiv, fig. 8..... | 560 |

Radiata.

|                                                                                                |         |
|------------------------------------------------------------------------------------------------|---------|
| <i>Lophophyllum</i> , Edwards & Haime.....                                                     | 560     |
| <i>L. proliferum</i> , McC. sp., 1860, pl. xxiv, fig. 1.....                                   | 560     |
| <i>Erisocrinus</i> .....                                                                       | 561     |
| <i>E. typus</i> , M. & W., 1865, pl. xxiv, fig. 6.....                                         | 561     |
| <i>Pteriocrinites</i> .....                                                                    | 561     |
| <i>P. macoupinensis</i> , Worthen MSS., pl. xxiv, fig. 3.....                                  | 561     |
| Subgenus <i>Scaphiocrinus</i> .....                                                            | 561     |
| <i>P. (Scaphiocrinus?) hemisphericus</i> , Shum. sp., 1858, pl. xxiv, fig. 5.....              | 561     |
| <i>P. (Scaphiocrinus) carbonarius</i> , M. & W., 1861, pl. xxiv, fig. 2.....                   | 562     |
| Subgenus <i>Zeacrinus</i> .....                                                                | 562     |
| <i>P. (Zeacrinus?) mucrospinus</i> , McC., 1859, pl. xxiv, fig. 12.....                        | 562     |
| <i>P. (Zeacrinus [Hydreionocrinus?]) acanthophorus</i> , M. & W., 1870, pl. xxiv, fig. 11..... | 563-565 |
| <i>Eupachycrinus</i> .....                                                                     | 565     |
| <i>E. fayetteensis</i> , Worthen MSS., pl. xxiv, fig. 10.....                                  | 565-566 |
| <i>E. tuberculatus</i> , M. & W., 1866, pl. xxiv, fig. 9.....                                  | 566     |
| <i>Agassizocrinus carbonarius</i> , Worthen MSS., pl. xxiv, fig. 4.....                        | 566     |

Mollusca.

Brachipoda.

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| <i>Chonetes</i> , Fischer.....                                     | 566     |
| <i>C. millepunctata</i> , M. & W., 1870, pl. xxv, fig. 3.....      | 566-569 |
| <i>Productus</i> , Sowerby.....                                    | 569     |
| <i>P. nebrascensis</i> , Owen, 1852, pl. xxv, fig. 8.....          | 569     |
| <i>P. longispinus</i> , Sowerby ? 1814, pl. xxv, fig. 10.....      | 569     |
| <i>P. punctatus</i> , Martin, 1809, pl. xxv, fig. 13.....          | 569     |
| <i>P. lasallensis</i> , Worthen MSS., pl. xxv, fig. 9.....         | 569-570 |
| <i>Chonetes smithii</i> , N. & P., 1855, pl. xxv, fig. 11.....     | 570     |
| <i>Hemipronites</i> , Pander.....                                  | 570     |
| <i>H. crassus</i> , M. & W., 1858, pl. xxv, fig. 12.....           | 570     |
| <i>Athyris</i> , McCoy.....                                        | 570     |
| <i>A. subtilita</i> , Hall's sp., pl. xxv, fig. 14.....            | 571     |
| <i>Syntretasma</i> , M. & W.....                                   | 571     |
| <i>S. hemiplicata</i> , Hall's sp., 1852, pl. xxvi, fig. 20.....   | 571     |
| <i>Meekella</i> , White & St. John.....                            | 571     |
| <i>M. striato-costata</i> , Cox sp., 1857, pl. xxvi, fig. 21.....  | 571     |
| <i>Rhynchonella</i> , Fischer.....                                 | 571     |
| <i>R. osagensis</i> , Swallow, 1858, pl. xxvi, fig. 22.....        | 571     |
| <i>Orthis</i> , Dalman.....                                        | 571     |
| <i>O. carbonaria</i> , Swallow.....                                | 571     |
| <i>Terebratulula</i> , Lilljeyd.....                               | 572     |
| <i>T. boidensis</i> , Morton, 1836, pl. xxv, fig. 15.....          | 572     |
| <i>Discina</i> , Lamarck, 1819.....                                | 572     |
| <i>D. nitida</i> , Phillips sp. ? pl. xxv, fig. 1.....             | 572     |
| <i>Lingula</i> , Bruguiere, 1789.....                              | 572     |
| <i>L. mytiloides</i> , Sowerby ? 1813, pl. xxv, fig. 2.....        | 572     |
| <i>Spirifer fultoniensis</i> , Worthen, MSS., pl. xxv, fig. 5..... | 572-573 |
| <i>Spirifer cameratus</i> , Morton, pl. xxv, fig. 7.....           | 573     |

|                                                                               | Page.   |
|-------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata.</i>                                                     |         |
| <i>Monotis</i> .....                                                          | 573     |
| <i>M. ? gregaria</i> , M. & W., 1870, pl. xxvi, fig. 5.....                   | 573-574 |
| <i>Macrodon</i> , Lycett .....                                                | 575     |
| <i>M. ? delicatus</i> , M. & W., 1870, pl. xxvi, fig. 3.....                  | 575     |
| <i>M. ? tenuistriatus</i> , M. & W., 1867, pl. xxvi, fig. 4.....              | 576     |
| <i>Avicula</i> .....                                                          | 576     |
| <i>A. morjanensis</i> , M. & W., 1866, pl. xxvi, fig. 14.....                 | 576-578 |
| <i>A. longa</i> , Geinitz sp., 1866, pl. xxvi, fig. 1.....                    | 578     |
| <i>Plucunopsis</i> .....                                                      | 578     |
| <i>P. carbonaria</i> , M. & W., 1866, pl. xxvii, fig. 2.....                  | 578-579 |
| <i>Schizodus</i> , King .....                                                 | 579     |
| <i>S. amplus</i> , M. & W., 1870, pl. xxvii, fig. 6.....                      | 579-580 |
| <i>S. (Prisconia) perlegans</i> , M. & W., 1870, pl. xxvi, fig. 19.....       | 581     |
| <i>S. curtus</i> , M. & W., 1866, pl. xxvi, fig. 16.....                      | 582     |
| <i>Myalina</i> , de Koninck .....                                             | 582     |
| <i>M. perattenuata</i> , M. & W., 1858, pl. xxvi, fig. 11.....                | 582     |
| <i>Edmondia</i> .....                                                         | 583     |
| <i>E. ? peroblonga</i> , M. & W., 1866, pl. xxvii, fig. 4.....                | 583-584 |
| <i>Clinopistha</i> , M. & W. ....                                             | 584     |
| <i>C. radiata</i> , var. <i>levis</i> , M. & W., 1870, pl. xxvii, fig. 7..... | 584-585 |
| <i>Allorisma</i> , King.....                                                  | 585     |
| <i>A. costata</i> , M. & W., 1869, pl. xxvi, fig. 15.....                     | 585-586 |
| <i>A. geinitzii</i> , Meek, 1867, pl. xxvi, fig. 23.....                      | 586     |
| <i>Chænocardia</i> , M. & W. ....                                             | 586     |
| <i>C. ovata</i> , M. & W., 1869, pl. xxvii, fig. 5.....                       | 586-587 |
| <i>Chænomya</i> , M. & W. ....                                                | 588     |
| <i>C. minnehaha</i> , Swallow sp., 1858, pl. xxvii, fig. 3.....               | 588     |
| <i>Cardiomorpha</i> .....                                                     | 588     |
| <i>C. missouriensis</i> , Shum., 1860, pl. xxvii, fig. 8.....                 | 588     |
| <i>Entolium</i> , Meek.....                                                   | 588     |
| <i>E. aviculatum</i> , Swallow sp., 1858, pl. xxvi, fig. 12.....              | 588     |
| <i>Lima</i> , Brugnière.....                                                  | 588     |
| <i>L. retifera</i> , Shum., 1858, pl. xxvi, fig. 2.....                       | 588     |
| <i>Aviculopecten neglectus</i> , Geinitz sp., 1866, pl. xxvi, fig. 7.....     | 589     |
| <i>Pleurophorus</i> , King.....                                               | 589     |
| <i>P. oblongus</i> , Meek ? 1872, pl. xxvi, fig. 6.....                       | 589     |
| <i>Nucula</i> , Lamarek .....                                                 | 589     |
| <i>N. parva</i> , McC., 1860, pl. xxvi, fig. 8.....                           | 589     |
| <i>N. beyrichi</i> , v. Schauth, 1854, pl. xxvi, fig. 9.....                  | 589     |
| <i>Gasteropoda.</i>                                                           |         |
| <i>Dentalium</i> , Linnæus .....                                              | 589     |
| <i>D. ? annulostratum</i> , M. & W., 1870, pl. xxix, fig. 7.....              | 589-590 |
| <i>D. meekianum</i> , Geinitz ? 1866, pl. xxix, fig. 8.....                   | 590     |
| <i>Orthonema</i> , M. & W., 1861.....                                         | 590     |
| <i>O. conica</i> , M. & W., 1866, pl. xxix, fig. 5.....                       | 590-591 |
| <i>Naticopsis</i> , McCoy .....                                               | 592     |
| <i>N. centrica</i> , N. & P., 1855, sp., pl. xxviii, fig. 13.....             | 592-593 |
| <i>Macrochilus</i> , Phillips.....                                            | 593     |
| <i>M. altonensis</i> , Worthen MSS., pl. xxviii, fig. 8.....                  | 593-594 |
| <i>M. newberryi</i> , Stevens sp., pl. xxviii, fig. 14.....                   | 594     |
| <i>Actæonina</i> , d'Orbigny.....                                             | 594     |
| <i>A. minuta</i> , Stevens sp., pl. xxix, fig. 2.....                         | 594     |
| <i>Platyceras</i> , Conrad.....                                               | 594     |
| <i>P. spinigerum</i> , Worthen MSS., pl. xxviii, fig. 4.....                  | 594-595 |
| <i>Naticopsis subovatus</i> , Worthen MSS., pl. xxviii, fig. 9.....           | 595     |
| <i>Naticopsis wheeleri</i> , Swallow sp., 1860, pl. xxviii, fig. 3.....       | 595     |
| <i>Naticopsis altonensis</i> , McC., 1865, pl. xxviii, fig. 11.....           | 595     |
| <i>Streptaxis</i> .....                                                       | 596     |
| <i>S. whitfieldi</i> , Meek, 1871, pl. xxix, fig. 1.....                      | 596     |
| <i>Loxonema</i> .....                                                         | 596     |
| <i>L. semicostata</i> , Meek, 1871, pl. xxix, fig. 2.....                     | 596     |
| <i>Actis</i> , Loven .....                                                    | 596     |
| <i>A. robusta</i> , Stevens, 1858, pl. xxix, fig. 6.....                      | 596     |
| <i>Polyplumopsis</i> , Portlock.....                                          | 596     |
| <i>P. chrysallis</i> , M. & W., 1865, pl. xxviii, fig. 7.....                 | 596-597 |



|                                                                                      | Page.   |
|--------------------------------------------------------------------------------------|---------|
| <i>Anomphalus</i> , M. & W. ....                                                     | 597     |
| <i>A. rotulus</i> , M. & W., 1866, pl. xxix, fig. 10 .....                           | 597     |
| <i>Microdoma</i> , M. & W. ....                                                      | 598     |
| <i>M. conica</i> , M. & W., 1866, pl. xxviii, fig. 2 .....                           | 598     |
| <i>Murchisonia inornata</i> , M. & W., 1866, pl. xxviii, fig. 6. ....                | 599-600 |
| <i>Pleurotomaria coxana</i> , M. & W., 1866, pl. xxviii, fig. 15 .....               | 600     |
| <i>Pleurotomaria spironema</i> , M. & W., 1866, pl. xxviii, fig. 5 .....             | 601-602 |
| <i>Pleurotomaria valvatiformis</i> , M. & W., 1866, pl. xxix, fig. 9 .....           | 602-603 |
| <i>Pleurotomaria conoides</i> , M. & W., 1866, pl. xxviii, fig. 1 .....              | 603-604 |
| <i>Straparollus</i> , Montfort .....                                                 | 604     |
| <i>S. (Euomphalus) pernodosus</i> , M. & W., 1870, pl. xxix, fig. 14 .....           | 604-605 |
| <i>S. (Euomphalus) subquadratus</i> , M. & W., 1870, pl. xxix, figs. 12 and 13 ..... | 605-607 |
| <i>S. (Euomphalus) subrugosus</i> , M. & W., pl. xxix, fig. 11 .....                 | 607     |
| <i>Ohlon</i> , Linneus .....                                                         | 608     |
| <i>C. carbonarius</i> , Stevens, 1859, pl. xxix, fig. 15 .....                       | 608     |
| <i>Cephalopoda</i> .                                                                 |         |
| <i>Nautilus (Temnocheilus) latus</i> , M. & W., 1870, pl. xxx, fig. 2 .....          | 608-609 |
| <i>N. (Temnocheilus) winslowi</i> , M. & W., 1870, pl. xxxii, fig. 2 .....           | 609-610 |
| <i>N. lasallensis</i> , M. & W., 1866, pl. xxxi, fig. 1 .....                        | 610-611 |
| <i>Goniatites compactus</i> , M. & W., 1865, pl. xxxi, fig. 2 .....                  | 611-612 |
| <i>Orthoceras</i> .....                                                              | 612     |
| <i>O. rushensis</i> , McC. ? 1860, pl. xxx, fig. 4 .....                             | 612     |
| <i>Articulata</i> .                                                                  |         |
| <i>Phillipsia</i> , Portlock .....                                                   | 612     |
| <i>P. (Griffithides) scitula</i> , M. & W., 1865, pl. xxxii, fig. 3 .....            | 612-615 |
| <i>P. (Griffithides ?) sangamonensis</i> , M. & W., 1865, pl. xxxii, fig. 4 .....    | 615-618 |
| <i>Dithyrocaris</i> , Scouler .....                                                  | 618     |
| <i>D. carbonarius</i> , M. & W., 1869, pl. xxxii, fig. 1 .....                       | 618-619 |

92.

MEEK, F. B. Notes on some of the Fossils figured in the recently issued Fifth volume of the Illinois State Geological Report. <Am. Jour. Sci., vol. vii, 3d ser., pp. 189-193; continued on pp. 369-376 and 484-490 and 580-584. 1874. New Haven, 1874.

In this series of articles Mr. Meek revises and extends the descriptions of a large number of the species embraced in the fifth volume of Illinois Geological Report, and also presents some very important philosophical discussions of the relations of the species and of the higher groups.

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>Actinocrinites sculptilis</i> , Hall .....                       | 190-191 |
| <i>Taxocrinus thiemei</i> , Hall .....                              | 191-192 |
| <i>Batocrinus pyriformis</i> , Shumard .....                        | 192     |
| <i>Actinocrinites delicatus</i> , M. & W. ....                      | 192-193 |
| <i>Actinocrinites Cyathocrinites</i> , Codonites, etc .....         | 369-374 |
| <i>Codonites stelliformis</i> .....                                 | 374-375 |
| <i>Pholidocidaris irregularis</i> , M. & W. ....                    | 375     |
| <i>Pentremites (Troostocrinus ?) woodmani</i> , M. & W. ....        | 375-376 |
| <i>Agassizocrinus</i> , Troost .....                                | 484     |
| <i>Fusulina gracilis</i> .....                                      | 484     |
| <i>Fusulina ventricosa</i> .....                                    | 484     |
| <i>Zeacrinus (Hydreionocrinus ?) acanthophorus</i> , M. & W. ....   | 485-486 |
| <i>Archæocidaris ?</i> , sp. undt .....                             | 486     |
| <i>Septopora cestriensis</i> , Prout .....                          | 486-488 |
| <i>Synocladia virgulacea</i> var. <i>biseriatis</i> , Swallow ..... | 486-488 |
| <i>Aviculopecten neglectus</i> , Geinitz .....                      | 488-489 |
| <i>Aviculopecten carboniferus</i> , Stevens sp. ....                | 489     |
| <i>Nuculana</i> , sp. undt., Meek, 1874 .....                       | 489-490 |
| <i>Edmondia ovata</i> , .....                                       | 580     |
| <i>Schizodus rossicus</i> , de Verneuil .....                       | 580-580 |
| <i>Solenomya</i> sp. undt., Meek, 1874 .....                        | 582-583 |
| <i>Placunopsis carbonaria</i> , M. & W. ....                        | 583     |
| <i>Anomphalus rotulus</i> , M. & W. ....                            | 583     |
| <i>Euomphalus rugosus</i> , Hall .....                              | 583-584 |
| <i>Pleurotomaria gurlayi</i> .....                                  | 584     |



## 93.

MEEK, F. B. The new genus *Euchondria*. < Am. Journ. Sci., vol. vii, 3d ser., p. 445. 1874. New Haven, 1874.

Mr. Meek, in a brief note, proposes the generic name *Euchondria*, of which the *Pecten neglectus* of Geinitz is the type.

## 94.

MEEK, F. B. [Descriptions of] *Pleurotomaria taggarti*. < Hayden's Ann. Rep. U. S. Geol. and Geog. Surv. of the Terr. for 1873, p. 231, foot-note. Washington, 1874.

Carboniferous.

|                                                        | Page. |
|--------------------------------------------------------|-------|
| <i>Pleurotomaria taggarti</i> , n. s., Meek, 1874..... | 231   |

## 95.

MEEK, F. B. Notes on some fossils from near the eastern base of the Rocky Mountains, west of Greeley and Evans, Colorado, and others from about two hundred miles farther eastward, with descriptions of a few new species. < Bulletin U. S. Geol. and Geog. Surv. of the Terr., 2d ser., No. 1, pp. 39-47. 1875. Washington, 1875.

These fossils are from the Fox Hills and Laramie (Lignitic) Group.

|                                                                                      | Page. |
|--------------------------------------------------------------------------------------|-------|
| <i>Anomia micronema</i> , n. s., Meek, 1875 .....                                    | 43    |
| <i>Corbicula</i> ? ( <i>Leptesthes</i> ) <i>planumbona</i> , n. s., Meek, 1875 ..... | 43-45 |
| <i>Cyrena</i> ? <i>holmesi</i> , n. s., Meek, 1875 .....                             | 45-46 |
| <i>Spheriotea</i> ? <i>obliqua</i> , n. s., Meek, 1875 .....                         | 46    |
| <i>Rhynchonella endlichi</i> , n. s., Meek, 1875 .....                               | 46-47 |

## 96.

MEEK, F. B. Description of *Unio* supposed to be of Triassic age. < Ann. Rep. Geogr. Expls. and Survs. West of the 100th Merid., by G. M. Wheeler, Appendix L L of the Ann. Rep. Chief of Engineers for 1875, pp. 83, 84. Washington, 1875.

|                                                   | Page. |
|---------------------------------------------------|-------|
| <i>Unio cristatensis</i> , n. s., Meek, 1875..... | 83-84 |
| <i>Unio gallinensis</i> , n. s., Meek, 1875.....  | 84    |
| <i>Unio terra-rubrae</i> , n. s., Meek, 1875..... | 84    |

## 97.

MEEK, F. B. Description of *Olenellus gilberti* and *O. howelli*. < Rep. Geogr. and Geol. Expls. and Survs. West of the 100th Merid., 4<sup>th</sup>, vol. iii, Geology, pp. 182, 183. 1875. Washington, 1875.

These two species are fully described and illustrated in White's Report on Invertebrate Paleontology, part i, Vol. iv, Wheeler's Expl. and Surv. West of the 100th Meridan.

|                                                                             | Page.   |
|-----------------------------------------------------------------------------|---------|
| <i>Olenus</i> ( <i>Olenellus</i> ) <i>gilberti</i> , n. s., Meek, 1875..... | 182-183 |
| <i>Olenus</i> ( <i>Olenellus</i> ) <i>howelli</i> , n. s., Meek, 1875.....  | 183     |

## 98.

MEEK, F. B. A report on some of the Invertebrate fossils of the Waverly group and Coal-Measures of Ohio. < Rep. Geol. Surv. of Ohio, vol. ii, part ii, Palæontology, pp. 269-347, plates x-xx. 1875. Columbus, 1875.

## WAVERLY GROUP SPECIES.

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                               |         |
| <i>Polysca.</i>                                                                |         |
| <i>Fenestella</i> , Lonsdale, 1837.....                                        | 273     |
| <i>F. delicata</i> Meek, 1871, pl. x, figs. 2 a, d .....                       | 273-274 |
| <i>F. multiporata</i> ? var. <i>lodiensis</i> , Meek, pl. x, figs. 1 a, c..... | 274-275 |

|                                                                                                                 | Page.   |
|-----------------------------------------------------------------------------------------------------------------|---------|
| <i>Brachiopoda.</i>                                                                                             |         |
| <i>Lingula</i> , Bruguière, 1792 .....                                                                          | 275     |
| <i>L. (Lingulella?) membranacea</i> , Winchell, 1863, pl. xiv, fig. 4.....                                      | 275     |
| <i>L. melie</i> , Hall? 1864, pl. xiv, fig. 3.....                                                              | 276     |
| <i>L. scotica</i> , Davidson? 1868, pl. xiv, fig. 9.....                                                        | 276-277 |
| <i>Discina</i> , Lamarek, 1819.....                                                                             | 277     |
| Subgenus <i>Orbiculoidea</i> , d'Orbigny, 1847.....                                                             | 277     |
| <i>D. (Orbiculoidea) newberryi</i> , Hall, 1864, pl. xiv, figs. 1 <i>a-d</i> .....                              | 277-278 |
| <i>D. (Orbiculoidea?) pleurites</i> , Meek, n. s., 1875, pl. xiv, figs. 2 <i>a, b</i> .....                     | 278-279 |
| <i>Strophomena</i> , Rafinesque, 1827.....                                                                      | 279     |
| Subgenus <i>Hemipronites</i> , Pander, 1830.....                                                                | 279     |
| <i>S. (Hemipronites) crenistria</i> , Phillips? sp., 1836, pl. x, figs. 5 <i>a-d</i> .....                      | 279-283 |
| <i>Productus</i> , Sowerby, 1814.....                                                                           | 282-283 |
| <i>Productus</i> sp., Meek, 1875, pl. x, figs. 4 <i>a-d</i> .....                                               | 283     |
| <i>Productus</i> sp., Meek, 1875, pl. x, fig. 3.....                                                            | 283     |
| <i>Athyris</i> , McCoy, 1844.....                                                                               | 283     |
| <i>A. lamellosa</i> , Leveillé? sp., 1835, pl. xiv, figs. 6 <i>a, b</i> .....                                   | 283-285 |
| <i>Spirifer</i> , Sowerby, 1815.....                                                                            | 285     |
| <i>S. carteri</i> , Hall, 1857, pl. xiv, figs. 7 <i>a-c, (d?)</i> .....                                         | 285-288 |
| Subgenus <i>Trigonotreta</i> , King, 1825.....                                                                  | 289     |
| <i>S. (Trigonotreta) striatiformis</i> , n. s., Meek, 1875, pl. xiv, figs. 8 <i>a-e</i> .....                   | 289-290 |
| <i>S. (Trigonotreta) biplicatus</i> , Hall?? 1858, pl. xiv, fig. 5.....                                         | 290-292 |
| <i>Lamellibranchiata.</i>                                                                                       |         |
| <i>Entolium</i> , Meek.....                                                                                     | 292     |
| <i>E. shumardianum</i> Winchell? sp., 1865, pl. xv, figs. 4 <i>a, b</i> .....                                   | 292-294 |
| <i>Aviculopecten</i> , McCoy, 1851.....                                                                         | 295     |
| <i>A. crenistriatus</i> , Meek, 1871, pl. xv, figs. 7 <i>a, b</i> .....                                         | 295-296 |
| <i>A. winchelli</i> n. s., Meek, 1875, pl. xv, figs. 5 <i>a</i> and 5 <i>b?</i> .....                           | 296-298 |
| <i>Palaeonilo</i> , Hall, 1870?.....                                                                            | 298     |
| <i>P. bedfordensis</i> n. s., Meek, 1875, pl. xv, figs. 3 <i>a-c</i> .....                                      | 298     |
| <i>Schizodus</i> , King, 1844.....                                                                              | 299     |
| <i>S. medinensis</i> , Meek, 1871, pl. xv, figs. 1 <i>a-c</i> .....                                             | 299-300 |
| <i>Grammysia</i> , De Verneuil, 1847.....                                                                       | 300     |
| <i>G. ? hannibalensis</i> , Shumard sp., 1855, pl. xvi, figs. 5 <i>a-c</i> .....                                | 300-301 |
| <i>G. ? rhomboides</i> , Meek, 1871, pl. xvi, figs. 7 <i>a, b</i> .....                                         | 302-303 |
| <i>G. ventricosa</i> , Meek, 1871, pl. xvi, figs. 6 <i>a, b</i> (and pl. xiii, figs. 5 <i>a, b, var.</i> )..... | 303     |
| <i>Edmondia</i> , De Koninck, 1844.....                                                                         | 304     |
| <i>E. tapesiformis</i> n. s., Meek, 1875, pl. xiii, fig. 6.....                                                 | 304     |
| <i>Cardiomorpha</i> , De Koninck, 1844.....                                                                     | 304     |
| <i>C. subglobosa</i> n. s., Meek, 1875, pl. xv, figs. 6 <i>a, b</i> .....                                       | 304-305 |
| <i>Prothyris</i> , Meek, 1869.....                                                                              | 305     |
| <i>P. meeki</i> , Winchell, MS., 1872, pl. xv, fig. 2.....                                                      | 305-306 |
| <i>Sanguinolites</i> , McCoy, 1844.....                                                                         | 306     |
| <i>S. ? obliquus</i> , Meek, 1871, pl. xvi, figs. 2 <i>a, b</i> .....                                           | 306-307 |
| <i>S. aeolus</i> , Hall, Whitfield, 1870?, pl. xvi, figs. 1 <i>a-c</i> .....                                    | 307-308 |
| <i>Promacrus</i> , Meek, 1871.....                                                                              | 308     |
| <i>P. andrewsi</i> , Meek, 1871, pl. xvii, figs. 1 <i>a, b</i> .....                                            | 308-309 |
| <i>Allorisma</i> , King, 1844.....                                                                              | 309     |
| <i>A. (Cercomyopsis) pleuropistha</i> , Meek, 1871, pl. xiii, figs. 4 <i>a-c</i> .....                          | 309-311 |
| <i>A. winchelli</i> , Meek, 1871, pl. xvi, figs. 3 <i>a-c</i> .....                                             | 311-312 |
| <i>A. ventricosa</i> , Meek, 1871, pl. xvi, figs. 4 <i>a, b</i> .....                                           | 312-313 |
| <i>Gasteropoda.</i>                                                                                             |         |
| <i>Platyceras</i> , Conrad, 1840.....                                                                           | 313     |
| <i>P. (Orthonychia?) lodiense</i> , Meek, 1871, pl. xiii, figs. 1 <i>a, b</i> .....                             | 313-314 |
| <i>Pleurotomaria</i> , De-france, 1826.....                                                                     | 314     |
| <i>P. textiliger</i> , Meek, 1871, pl. xiii, figs. 7 <i>a, b</i> .....                                          | 314-315 |
| <i>Pteropoda.</i>                                                                                               |         |
| <i>Conularia</i> , Miller, 1818.....                                                                            | 316     |
| <i>C. micronema</i> , Meek, 1871, pl. xviii, figs. 1 <i>a-d</i> .....                                           | 316     |
| <i>C. newberryi</i> , Hall, pl. xviii, figs. 2 <i>a, b</i> .....                                                | 316-317 |
| <i>Crustacea.</i>                                                                                               |         |
| <i>Entomostraca.</i>                                                                                            |         |
| <i>Ceratiocaris</i> , McCoy.....                                                                                | 317     |
| ? Subgenus <i>Colpocaris</i> , Meek, 1872.....                                                                  | 317     |
| <i>C. (Colpocaris) bradleyi</i> , Meek, 1872, pl. xviii, figs. 6 <i>a-e</i> .....                               | 318-319 |

|                                                                                               | Page.   |
|-----------------------------------------------------------------------------------------------|---------|
| <i>C. (Colpocaris) clytroides</i> , Meek, 1872, pl. xviii, figs. 5 <i>a-c</i> .....           | 319-320 |
| Subgenus <i>Solenocaris</i> , Meek, 1872.....                                                 | 320-321 |
| <i>C. (Solenocaris) strigata</i> , Meek 1872, pl. xviii, figs. 4 <i>a-c</i> .....             | 321     |
| <i>Tetradecopoda</i> .                                                                        |         |
| <i>Archæocaris</i> , Meek, 1872.....                                                          | 321     |
| <i>A. vermiformis</i> , Meek, 1872, pl. xviii, fig. 7.....                                    | 321-322 |
| <i>Trilobita</i> .                                                                            |         |
| <i>Phillipsia</i> , Portlock, 1843.....                                                       | 323     |
| <i>P. (Griffithides?) lodiensis</i> , n. s., Meek, 1875, pl. xviii, fig. 3.....               | 323-325 |
| COAL MEASURE SPECIES.                                                                         |         |
| <i>Mollusca</i> .                                                                             |         |
| <i>Polyzoa</i> .                                                                              |         |
| <i>Synocladia</i> , King, 1849.....                                                           | 326     |
| <i>S. biserialis</i> , Swallow, 1858, pl. xx, figs. 5 <i>a, b</i> .....                       | 326-327 |
| <i>Ptilodictya</i> , Lonsdale, 1839.....                                                      | 327     |
| <i>P. (Stictopora) sereata</i> , n. s., Meek, 1875, pl. xx, fig. 4.....                       | 327-328 |
| <i>P. (Stictopora) carbonaria</i> , Meek, 1871, pl. xx, figs. 3 <i>a, b</i> .....             | 328     |
| <i>Brachiopoda</i> .                                                                          |         |
| <i>Spirifer</i> , Sowerby, 1815.....                                                          | 329     |
| <i>S. (Trigonotreta) opinus</i> , Hall? 1858, pl. xix, figs. 14 <i>a-d</i> ( <i>e?</i> )..... | 329-330 |
| <i>Mollusca (Proper)</i> .                                                                    |         |
| <i>Lamellibranchiata</i> .                                                                    |         |
| <i>Ariculopecten</i> , McCoy, 1851.....                                                       | 330     |
| <i>A. (Streblopteria?) hertzeri</i> , n. s., Meek, 1875, pl. xix, figs. 13 <i>a-c</i> .....   | 330-331 |
| <i>Placunopsis</i> , Morris & Lycett, 1853.....                                               | 331     |
| <i>P. recticardinalis</i> , n. s., Meek, 1875, pl. xix, fig. 12.....                          | 331-333 |
| <i>Posidonomya</i> , Brown, 1837.....                                                         | 333     |
| <i>P. fracta</i> , n. s., Meek, 1875, pl. xix, figs. 7 <i>a, b</i> .....                      | 333-334 |
| <i>Macrodon</i> , Lycett, 1845.....                                                           | 334     |
| <i>M. obsoletus</i> , Meek, 1871, pl. xix, fig. 9.....                                        | 334-335 |
| <i>Yoldia</i> , Möller, 1842.....                                                             | 335     |
| <i>Y. stevensoni</i> , Meek, 1871, pl. xix, figs. 4 <i>a, b</i> .....                         | 335     |
| <i>Y. (Palæoneilo?) carbonaria</i> , Meek, 1871, pl. xix, fig. 5.....                         | 336     |
| <i>Schizodus</i> , King, 1844.....                                                            | 336     |
| <i>S. cuneatus</i> , n. s., Meek, 1875, pl. xx, fig. 7.....                                   | 336-337 |
| <i>Aviculopinna americana</i> , Meek, 1867, pl. xx, fig. 2.....                               | 337-338 |
| <i>Pleuraphorus</i> , King, 1844.....                                                         | 338     |
| <i>P. tropidophorus</i> , n. s., Meek, 1875, pl. xix, figs. 10 <i>a, b</i> .....              | 338-339 |
| <i>Solenomya</i> , Lamarck, 1818.....                                                         | 339     |
| <i>S. ?? anodontoides</i> , n. s., Meek, 1875, pl. xix, fig. 11.....                          | 339-340 |
| <i>Astartella</i> , Hall, 1858.....                                                           | 340     |
| <i>A. newberryi</i> , n. s., Meek, 1875, pl. xix, fig. 3.....                                 | 340-341 |
| <i>A. varica</i> , McChesney, 1860, pl. xix, fig. 2.....                                      | 341     |
| <i>Astartella</i> , sp., Meek, pl. xix, fig. 1 <i>a, b</i> .....                              | 341-342 |
| <i>Cypriocardina</i> , Hall, 1860.....                                                        | 342     |
| <i>C. ? carbonaria</i> , Meek, 1871, pl. xix, fig. 8 <i>a, b</i> .....                        | 342-343 |
| <i>Allorisma</i> , King, 1844.....                                                            | 343     |
| <i>A. costata</i> , M. & W., 1869, pl. xix, figs. 6 <i>a, b</i> .....                         | 344-345 |
| <i>Gasteropoda</i> .                                                                          |         |
| <i>Platyceras</i> , Conrad, 1840.....                                                         | 345     |
| <i>P. tortum</i> , Meek, 1871, pl. xx, figs. 1 <i>a-c</i> .....                               | 345     |
| <i>Macrocheilus</i> , Phillips, 1841.....                                                     | 346     |
| <i>M. klippiarti</i> , Meek, 1872, pl. xx, figs. 6 <i>a-c</i> .....                           | 346-347 |

MEEK, F. B., and A. H. WORTHEN. Paleontology of Illinois. Descriptions of Invertebrates. <Geological Survey of Illinois, vol. vi, section ii, pp. 491-532, plates 23-32. 1875. Springfield, 1875.

Published by authority of the legislature, 1875.

Genus *Carbonaria*. A portion of these descriptions are by Mr. Worthen alone, and are not mentioned in the following list:

LOWER SILURIAN SPECIES.

| <i>Echinodermata.</i>                                                      | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Homocrinus</i> , Hall.....                                              | 492     |
| <i>H. angustatus</i> , M. & W., 1870, pl. xxiii, fig. 8.....               | 492-493 |
| <i>Heterocrinus crassus</i> , M. & W., 1865, pl. xxiii, fig. 1.....        | 493     |
| <i>Mollusca.</i>                                                           |         |
| <i>Lamellibranchiata.</i>                                                  |         |
| <i>Modiolopsis subnasuta</i> , M. & W., 1870, pl. xxiii, figs. 9 a, b..... | 494-495 |
| <i>Gasteropoda.</i>                                                        |         |
| <i>Subulites</i> , Conrad.....                                             | 495     |
| <i>S. inflatus</i> , M. & W., 1869, pl. xxiii, fig. 5.....                 | 495-496 |
| <i>Articulata.</i>                                                         |         |
| <i>Asaphus</i> , Brongniart.....                                           | 497     |
| <i>A. (Isotelus) vigilans</i> , M. & W., 1870, pl. xxiii, fig. 6.....      | 497-498 |

UPPER SILURIAN SPECIES.

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Spongiæ.</i>                                                                |         |
| <i>Astylospongia præmorsa</i> , Goldf. ? sp., 1826, pl. xxv, figs. 2, 2 a..... | 499     |
| <i>Foraminifera ?</i>                                                          |         |
| <i>Receptaculites</i> , DeFrance.....                                          | 500     |
| <i>R. formosus</i> , M. & W., 1870, pl. xxiv, fig. 1.....                      | 500     |
| <i>Brachiopoda.</i>                                                            |         |
| <i>Stricklandinia</i> , Billings.....                                          | 502     |
| <i>S. deformis</i> , M. & W., 1870, pl. xxiv, figs. 5 a, b.....                | 502-503 |
| <i>Cephalopoda.</i>                                                            |         |
| <i>Orthoceras</i> , Auct.....                                                  | 503     |
| <i>O. crebristriatum</i> , M. & W., 1865, pl. xxvi, fig. 2.....                | 503-504 |
| <i>O. medullare</i> , Hall ? 1860, pl. xxvi, fig. 1.....                       | 504     |
| <i>O. angulatum</i> , Wahl, 1827, pl. xxiv, fig. 8.....                        | 504     |
| <i>O. julietensis</i> , M. & W., 1865, pl. xxvi, fig. 5.....                   | 505     |
| <i>Cyrtoceras</i> , Goldfuss.....                                              | 506     |
| <i>C. dardanus</i> , Hall ? 1861, pl. xxv, fig. 6.....                         | 506     |
| <i>Lituites</i> , Breyn.....                                                   | 507     |
| <i>L. graftonensis</i> , M. & W., 1869, pl. xxv, fig. 1.....                   | 507-508 |
| <i>Crustacea.</i>                                                              |         |
| <i>Lichas</i> , Dalman.....                                                    | 508     |
| <i>L. boltoni</i> , Bigsby, sp., 1825, pl. xxv, fig. 5.....                    | 508     |
| <i>Ilaenus</i> , Dalman.....                                                   | 508     |
| <i>I. (Bumastus) graftonensis</i> , M. & W., 1869, pl. xxv, fig. 4.....        | 508-510 |
| <i>Sphærezochus</i> , Beyrich.....                                             | 510     |
| <i>S. romingeri</i> , Hall, 1862, pl. xxiv, fig. 4.....                        | 510     |
| <i>Mollusca.</i>                                                               |         |
| <i>Cephalopoda.</i>                                                            |         |
| <i>Phragmoceras</i> .....                                                      | 511     |
| <i>P. walshii</i> , M. & W., 1866, pl. xxviii, figs. 2 a, b.....               | 511-512 |
| <i>Orthoceras</i> .....                                                        | 512     |
| <i>O. winchelli</i> , M. & W., 1866, pl. xxviii, fig. 1.....                   | 512-513 |

LOWER CARBONIFEROUS SPECIES.

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| <i>Echinodermata.</i>                                                           |         |
| <i>Synbathocrinus</i> , Phillips.....                                           | 514     |
| <i>S. robustus</i> , Shumard, 1866, pl. xxix, fig. 4.....                       | 514     |
| <i>Dichocrinus</i> , Munster.....                                               | 515     |
| <i>D. ficus</i> , Casseday & Lyon, 1860, pl. xxix, fig. 7.....                  | 515     |
| <i>Poteroocrinus</i> .....                                                      | 516     |
| Subgenus <i>Scaphiocrinus</i> , Hall.....                                       | 519     |
| <i>P. (Scaphiocrinus) unicus</i> , Hall, 1861, pl. xxix, fig. 1.....            | 519     |
| <i>Pentremites</i> , Say.....                                                   | 521     |
| <i>P. (Tricoelocrinus), obliquatus</i> Roemer, sp., 1852, pl. xxxi, fig. 4..... | 521     |
| <i>Spirifer</i> , Sowerby.....                                                  | 521     |
| <i>S. fastigatus</i> , M. & W., 1870, pl. xxx, fig. 3.....                      | 521-523 |
| <i>S. neglectus</i> , Hall, 1858, pl. xxx, figs. 2 a, and 1 c.....              | 523     |
| <i>S. suborbicularis</i> , Hall, 1858, pl. xxx, fig. 1.....                     | 523-524 |



## COAL MEASURE SPECIES.

|                                                                        | Page.   |
|------------------------------------------------------------------------|---------|
| <i>Azophyllum</i> , Edwards & Haimo.....                               | 525     |
| <i>A. rudis</i> , White & St. John, pl. xxxii, figs. 6 a-c.....        | 525     |
| <i>Conocardium</i> , Brown.....                                        | 529     |
| <i>C. obliquum</i> , M. & W., 1865, pl. xxxiii, fig. 4.....            | 529     |
| <i>Pleurophorus</i> ? King.....                                        | 529     |
| <i>P. ? angulatus</i> , M. & W., 1865, pl. xxxiii, fig. 5.....         | 529-530 |
| <i>Carbonarea</i> , Meek & Worthen, 1870.....                          | 530     |
| <i>C. gibbosa</i> , M. & W., 1876, pl. xxxiii, fig. 6.....             | 531     |
| <i>Nautilus</i> , Linnaeus.....                                        | 531     |
| <i>N. (Cryptoceras) capax</i> , M. & W., 1865, pl. xxxiii, fig. 1..... | 532     |

## 100.

MEEK, F. B. Notice of a very large *Goniatite* from Eastern Kansas (Carboniferous). <Bulletin U. S. Geol. and Geog. Surv. of the Terr. No. 6, 2d ser., vol. i, p. 445. Washington, 1875.

The author regards it as at most only a variety of *G. globulosus*, Meek & Worthen, although attaining so great size.

|                                                                     | Page. |
|---------------------------------------------------------------------|-------|
| <i>Goniatites globulosus</i> var. <i>excelsus</i> , Meek, 1875..... | 445   |

## 101.

MEEK, F. B. Descriptions and illustrations of fossils from Vancouver's and Suclia Islands, and other Northwestern localities. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. ii, No. 4, pp. 351-374, 6 plates. 1876. Washington, 1876.

Carboniferous, Cretaceous, and Tertiary; mostly Cretaceous. A large part of the species embraced in this paper were originally described by the author in 1856 in vol. iv of Transactions Albany Institute, and are here redescribed with others and illustrated.

## CARBONIFEROUS SPECIES.

| <i>Brachiopoda.</i>                                                | Page.   |
|--------------------------------------------------------------------|---------|
| <i>Productus</i> , Sowerby.....                                    | 354     |
| <i>P. latissimus</i> , Sowerby, 1822, pl. i, fig. 1.....           | 354-355 |
| <i>Spirifer</i> , Sowerby.....                                     | 355     |
| <i>S. keokuk</i> , Hall? 1858, pl. i, figs. 3 and 3 a.....         | 355     |
| <i>Athyris</i> , McCoy, 1844.....                                  | 355     |
| <i>A. subtilita</i> , Hall, sp., 1852, pl. i, figs. 2 and 2 a..... | 355-356 |

## CRETACEOUS SPECIES.

| <i>Lamellibranchiata.</i>                                                                      | Page.   |
|------------------------------------------------------------------------------------------------|---------|
| <i>Nucula</i> , Lamarck.....                                                                   | 356     |
| <i>N. traskana</i> , Meek, 1857.....                                                           | 356     |
| <i>Grammatodon</i> , Meek.....                                                                 | 356     |
| <i>G. ? vancouverensis</i> , Meek, 1857, pl. iii, figs. 5 and 5 a.....                         | 356-357 |
| <i>Arca</i> , Sim.....                                                                         | 357     |
| <i>A. ? equilateralis</i> , Meek, 1857, pl. ii, figs. 6, 6 a.....                              | 357     |
| <i>Inoceramus</i> , Sowerby.....                                                               | 358     |
| <i>I. crispus</i> ? var. <i>subundatus</i> , Meek, 1861, pl. iii, figs. 1, 1 a and 3, 3 a..... | 358-359 |
| <i>I. barabini</i> , Morton, 1834, fig. —.....                                                 | 358     |
| <i>Inoceramus</i> ——— ½, pl. i, fig. 6.....                                                    | 359     |
| <i>Trigonia</i> , Bruguière.....                                                               | 359     |
| <i>T. evansi</i> , Meek, 1857, pl. ii, figs. 7 a, b.....                                       | 359-360 |
| <i>Protocardia</i> , Beyrich.....                                                              | 360     |
| <i>P. scitula</i> , Meek, 1857, pl. iii, figs. 4 and 4 a.....                                  | 360-361 |
| <i>Cyprineria</i> , Conrad.....                                                                | 361     |
| <i>C. ? tenuis</i> , Meek, 1861, pl. ii, figs. 5 a, b.....                                     | 361     |
| <i>Pholadomya</i> , Sowerby.....                                                               | 362     |
| <i>P. subelongata</i> , Meek, 1857, pl. ii, figs. 1 a.....                                     | 362     |
| <i>Goniomya</i> , Agassiz.....                                                                 | 362     |
| <i>G. borealis</i> , Meek, 1857, pl. ii, fig. 2.....                                           | 362-363 |
| <i>Thracia</i> , Leach.....                                                                    | 363     |
| <i>T. ? occidentalis</i> , Meek, 1857, pl. ii, figs. 3 a.....                                  | 363     |
| <i>T. ? subtruncata</i> , Meek, 1857, pl. ii, figs. 4 and 4 a.....                             | 363-364 |

|                                                                                         | Page.   |
|-----------------------------------------------------------------------------------------|---------|
| <i>Gasteropoda.</i>                                                                     |         |
| <i>Dentalium</i> , Linnæus.....                                                         | 364     |
| <i>D. komookense</i> , Meek, 1857, pl. iii, fig. 6.....                                 | 364     |
| <i>Cephalopoda.</i>                                                                     |         |
| <i>Baculites</i> , Lamarek.....                                                         | 364     |
| <i>B. chicornis</i> , Trask? 1856, pl. iv, figs. 2 <i>a-c</i> .....                     | 364-365 |
| <i>B. occidentalis</i> , Meek, 1861, pl. iv, figs. 1 <i>a-b</i> .....                   | 366-367 |
| <i>Heteroceras</i> , d'Orbigny.....                                                     | 367     |
| <i>H. cooperi</i> , Gabb sp., 1864, pl. iii, figs. 7 <i>a</i> .....                     | 367     |
| <i>Ammonites</i> , Bruguière.....                                                       | 367     |
| <i>A. newberryanus</i> , Meek, 1857, pl. iv, figs. 3 <i>a, b</i> .....                  | 367-368 |
| <i>A. complexus</i> var. <i>suciænsis</i> , Meek, 1861, pl. v, figs. 2 <i>a-c</i> ..... | 369-370 |
| <i>Placentineras</i> , Meek.....                                                        | 370     |
| <i>P. ? vancouverense</i> , Meek, 1861, pl. vi, figs. 1 <i>a-c</i> .....                | 370-371 |
| <i>Phylloceras</i> , Suess.....                                                         | 371     |
| <i>P. ? ramosus</i> , Meek, 1857, pl. v, figs. 1 <i>a-b</i> .....                       | 371-373 |
| <i>Nautilus</i> , Linnæus.....                                                          | 373     |
| <i>N. campbelli</i> , Meek, 1861, pl. vi, figs. 2, 2 <i>a</i> .....                     | 373     |

TERTIARY SPECIES.?

|                                                                   |     |
|-------------------------------------------------------------------|-----|
| <i>Mactra</i> , Linnæus.....                                      | 374 |
| <i>M. gibbsana</i> , Meek, 1861, pl. ii, figs. 8 <i>a-b</i> ..... | 374 |

102.

MEEK, F. B. Note on the new genus *Uintacrinus*, Grinnell. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. ii, No. 4, pp. 375-378, 2 wood cuts. 1876. Washington, 1876.

This paper consists largely of a redescription and rectification of the genus.

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| <i>Uintacrinus</i> , n. g., Grinnell, 1876.....                      | 375-378 |
| <i>U. socialis</i> , n. s., Grinnell, 1876?, figs. A, B, p. 375..... | 375     |

103.

MEEK, F. B. Descriptions of the Cretaceous Fossils collected on the San Juan exploring expedition under Capt. J. N. Macomb, U. S. Engineers. <Report of the Exploring Expedition from Santa Fé, New Mexico, to the junction of the Grand and Green rivers of the Great Colorado of the West, in 1859, pp. 121-133, pls. i and ii. Washington, 1876.

The exploration was made in 1859, but the report was not published until 1876, when Mr. Meek revised the work in accordance with his views at the time of publication.

|                                                                                     |         |
|-------------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata.</i>                                                           | Page.   |
| <i>Ostrea</i> , Linnæus.....                                                        | 123     |
| <i>O. lugubris</i> , Conrad, 1857, pl. i, figs. 1 <i>a-d</i> .....                  | 123-124 |
| <i>O. (Gryphæa?) uniformis</i> , n. s., Meek, 1876, pl. i, figs. 2 <i>a-c</i> ..... | 124     |
| <i>Eragya</i> , Say.....                                                            | 124     |
| <i>E. columbella</i> , n. s., Meek, 1876, pl. i, figs. 3 <i>a-d</i> .....           | 124-125 |
| <i>Anomia</i> , Linnæus.....                                                        | 125     |
| <i>A. nitida</i> , n. s., Meek, 1876, pl. i, figs. 4 <i>a-b</i> .....               | 125     |
| <i>Caprotina</i> , d'Orbigny.....                                                   | 126     |
| <i>C. (Requienia?) bicornis</i> , Meek, 1876, pl. i, figs. 7 <i>a-b</i> .....       | 126     |
| <i>Plicatula</i> , Lamarek.....                                                     | 126     |
| <i>P. arenaria</i> , n. s., Meek, 1876, pl. i, figs. 5 <i>a-c</i> .....             | 126-127 |
| <i>Inoceramus</i> , Sowerby.....                                                    | 127     |
| <i>I. fragilis</i> , H. & M., 1856?, pl. i, fig. 6.....                             | 127     |
| <i>Crassatella</i> , Lamarek.....                                                   | 127     |
| <i>C. shumardi</i> , n. s., Meek, 1876, pl. ii, figs. 7 <i>a-c</i> .....            | 127-128 |
| <i>Cypremeria</i> , Conrad.....                                                     | 128     |
| <i>C. ? crassa</i> , n. s., Meek, 1876, pl. i, figs. 8 <i>a-b</i> .....             | 128     |
| <i>Cardium</i> , Linnæus.....                                                       | 128     |
| <i>C. bellulum</i> , n. s., Meek, 1876, pl. ii, figs. 6 <i>a, b</i> .....           | 128-129 |

|                                                                                   | Page.   |
|-----------------------------------------------------------------------------------|---------|
| <i>Gasteropoda.</i>                                                               |         |
| <i>Actæon</i> , Montfort .....                                                    | 129     |
| <i>A. intercalaris</i> , n. s., Meek, 1876, pl. ii, figs. 4 <i>a-c</i> .....      | 129     |
| <i>Anchura</i> , Conrad .....                                                     | 129     |
| <i>A.?</i> <i>newberryi</i> , n. s., Meek, 1876, pl. ii, fig. 5 .....             | 129-130 |
| <i>Cephalopoda.</i>                                                               |         |
| <i>Baculites</i> , Lamarck .....                                                  | 130     |
| <i>B. anceps</i> var. <i>obtus</i> , Meek, 1876, pl. ii, figs. 1 <i>a-h</i> ..... | 130-132 |
| <i>Prionocyclus</i> , Meek .....                                                  | 132     |
| <i>P.?</i> <i>macombi</i> , n. s., Meek, 1876, pl. ii, figs. 3 <i>a-d</i> .....   | 132-133 |

## 104.

MEEK, F. B. Report on the Paleontological collections of the expedition, <Report Expl. Great Basin of the Terr. of Utah, in 1859. By J. H. Simpson. Appendix J, pp. 337-373, pls. i-v. Washington, 1876.

Devonian, Carboniferous, Jurassic, Cretaceous, and Tertiary. The explanations were made and the fossils collected nearly eighteen years before the publication of this report, but the paleontology was corrected in accordance with the views of the author at the time of publication.

## Descriptions of new species.

## DEVONIAN FOSSILS.

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                           |         |
| <i>Brachiopoda.</i>                                                        |         |
| <i>Productus</i> , Sowerby .....                                           | 345     |
| <i>P. subaculeatus</i> , Murchison ? 1840, pl. i, figs. 3 <i>a-c</i> ..... | 345     |
| <i>Spirifer</i> , Sowerby .....                                            | 345     |
| <i>S. utahensis</i> , Meek, 1860, pl. i, figs. 4 <i>a-c</i> .....          | 345-346 |
| <i>S. engelmanni</i> , Meek, 1860, pl. i, figs. 1 <i>a-c</i> .....         | 346-347 |
| <i>S. strigosus</i> , Meek, 1860, pl. i, figs. 5 <i>a-d</i> .....          | 347     |
| <i>Atrypa</i> , Dalman .....                                               | 347     |
| <i>A. reticularis</i> (Lin.) Dalm., 1767, pl. i, figs. 6 <i>a-b</i> .....  | 347-348 |
| <i>A. aspera</i> , Schloth, 1813, pl. i, figs. 2 <i>a-b</i> .....          | 348     |

## CARBONIFEROUS FOSSILS.

|                                                                                              |         |
|----------------------------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                                             |         |
| <i>Polyzoa.</i>                                                                              |         |
| <i>Archimeditopora</i> , D'Orbigny .....                                                     | 348     |
| <i>Archimeditopora</i> , ——— ? Meek, pl. i, fig. 11 .....                                    | 348     |
| <i>Brachiopoda.</i>                                                                          |         |
| <i>Chonetes</i> , Fischer .....                                                              | 348     |
| <i>C. verneuilliana</i> var. <i>utahensis</i> , Meek, 1876, pl. ii, figs. 2 <i>a-c</i> ..... | 348-349 |
| <i>Productus</i> , Sowerby .....                                                             | 349     |
| <i>P. semistriatus</i> , Meek, 1860, pl. i, figs. 7 <i>a-b</i> .....                         | 349     |
| <i>P. multistriatus</i> , Meek, 1860, pl. i, figs. 8 <i>a-b</i> .....                        | 350     |
| <i>Athyris</i> , McCoy .....                                                                 | 350     |
| <i>A. subtilita</i> , Hall, sp., 1852, pl. ii, figs. 4 <i>a-b</i> .....                      | 350-351 |
| <i>Spirifer</i> , Sowerby .....                                                              | 351     |
| <i>S. (Spiriferina?) scobina</i> , Meek, 1860, pl. ii, figs. 5 <i>a-c</i> .....              | 351-352 |
| <i>S. (Spiriferina) pulcher</i> , Meek, 1860, pl. ii, figs. 1 <i>a-h</i> .....               | 352     |
| <i>S. cameratus</i> , Morton, 1836, pl. ii, figs. 3 <i>a, b</i> .....                        | 353     |
| <i>Lamellibranchiata.</i>                                                                    |         |
| <i>Aviculopecten</i> , McCoy .....                                                           | 354     |
| <i>A. utahensis</i> , Meek, 1860, pl. i, figs. 9 <i>a-c</i> .....                            | 354     |
| <i>Cephalopoda.</i>                                                                          |         |
| <i>Orthoceras</i> , Auct. ....                                                               | 354     |
| <i>O. baculum</i> , Meek, 1860, pl. i, figs. 10 <i>a-b</i> .....                             | 254-355 |
| <i>Radiata.</i>                                                                              |         |
| <i>Echinodermata.</i>                                                                        |         |
| <i>Pentacrinites</i> , Miller .....                                                          | 355     |
| <i>Pentacrinites</i> , undt. sp., Meek, pl. iii, figs. 5 <i>a-c</i> .....                    | 355     |
| <i>Mollusca.</i>                                                                             |         |
| <i>Lamellibranchiata.</i>                                                                    |         |
| <i>Ostrea</i> , Linnæus .....                                                                | 355     |

## JURASSIC SPECIES.

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>O. engelmanni</i> , Meek, 1860, pl. iii, fig. 6 .....                       | 355-356 |
| <i>Gryphæa calceola</i> , Quenstedt? 1856, pl. iii, fig. 2 .....               | 356     |
| <i>Camptonectes</i> , Agassiz .....                                            | 356     |
| <i>C. bellistriata</i> , Meek, 1860, pl. iii, figs. 3 <i>a-d</i> .....         | 356-357 |
| <i>Gasteropoda</i> .                                                           |         |
| <i>Dentalium</i> , Linn .....                                                  | 357     |
| <i>D.?</i> <i>subquadratum</i> , Meek, 1860, pl. iii, figs. 1 <i>a-c</i> ..... | 357     |
| <i>Cephalopoda</i> .                                                           |         |
| <i>Belemnites</i> , Lamarck .....                                              | 358     |
| <i>B. densus</i> , M. & H., 1858, pl. iii, figs. 4 <i>a, b</i> .....           | 358     |

CRETACEOUS FOSSILS.

|                                                                                                |         |
|------------------------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> .                                                                     |         |
| <i>Inoceramus</i> , Sowerby .....                                                              | 358     |
| <i>I. problematicus</i> , Schloth., 1820, pl. iv, figs. 1 <i>a</i> and 1 <i>b, c</i> (?) ..... | 358-359 |
| <i>Anomia</i> , Linn .....                                                                     | 359     |
| <i>A. concentrica</i> , Meek, 1860, pl. iv, fig. 3 .....                                       | 359     |
| <i>Inoceramus simpsoni</i> , Meek, 1860, pl. iv, fig. 4 .....                                  | 360     |

BEAR RIVER FRESH-WATER OR ESTUARY BEDS.

*Mollusca*.

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> .                                                     |         |
| <i>Unio</i> , Retzius .....                                                    | 361     |
| <i>U. vetustus</i> , Meek, 1860, pl. v, figs. 12 <i>a, b</i> .....             | 361     |
| <i>Corbula</i> , Bruguière .....                                               | 361     |
| <i>C. (Anisorhynchus) pyriformis</i> , Meek, 1860, pl. v, figs. 9 and 10 ..... | 361-362 |
| <i>C. engelmanni</i> , Meek, 1860, pl. v, figs. 13 <i>a, b</i> .....           | 362     |
| <i>Gasteropoda</i> .                                                           |         |
| <i>Pyrgulifera</i> , 1871, Meek .....                                          | 363     |
| <i>P. humerosa</i> , Meek, 1860, pl. v, figs. 6 <i>a-c</i> .....               | 363     |
| <i>Limnæa nitidula</i> , Meek, 1860, pl. v, fig. 14 .....                      | 363-364 |
| <i>Rhytophorus</i> .....                                                       | 364     |
| <i>R. priscus</i> , Meek, 1860, pl. v, figs. 4 <i>a, b</i> .....               | 364     |

TERTIARY FOSSILS.

*Mollusca*.

|                                                                                           |         |
|-------------------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata</i> .                                                                |         |
| <i>Unio</i> , Retzius .....                                                               | 364     |
| <i>U. haydeni</i> , Meek, 1860, pl. v, figs. 11 <i>a, b</i> .....                         | 364-365 |
| <i>Goniobasis</i> , Lea .....                                                             | 365     |
| <i>G. simpsoni</i> , Meek, 1860, pl. v, figs. 1 <i>a-e</i> .....                          | 365-366 |
| <i>G. arcta</i> , Meek, 1860, pl. v, fig. 5 .....                                         | 366     |
| <i>Planorbis</i> , Müller .....                                                           | 366     |
| <i>P. spectabilis</i> , Meek, 1860, pl. v, figs. 7 <i>a-d</i> .....                       | 366-367 |
| <i>P. spectabilis</i> var. <i>utahensis</i> , Meek, 1860, pl. v, figs. 8 <i>a-c</i> ..... | 367     |
| <i>Limnæa vetusta</i> , Meek, 1860, pl. v, figs. 3 <i>a, b</i> .....                      | 367     |
| <i>L. similis</i> , Meek, 1860, pl. v, figs. 2 <i>a, b</i> .....                          | 367     |
| Catalogue of the organic remains contained in the collection .....                        | 368-373 |
| Devonian species .....                                                                    | 368     |
| Carboniferous species .....                                                               | 368-371 |
| Permian forms .....                                                                       | 371-372 |
| Jurassic species .....                                                                    | 372     |
| Cretaceous species .....                                                                  | 372-373 |
| Fossils of the Bear River Fresh or Brackish water beds .....                              | 373     |
| Tertiary species .....                                                                    | 373     |

MEEK, F. B. A report on the Invertebrate Cretaceous and Tertiary Fossils of the Upper Missouri Country. <Rep. U. S. Geol. & Geogr. Surv. of the Terr. 4°. vol. ix, pp. i-xiv, 1-629, pls. i-xlv. Washington, 1876.

This great work contains descriptions and illustrations of nearly 300 species; more than 200 genera and subgenera are fully diagnosed, besides which full diagnoses of the families which embrace them are given; also philosophical discussion of many important questions. The greater part of the species embraced in this volume were previously, from time to time, described and published, mainly in the publications of the Acad. Nat. Sc. Phila.



## CONTENTS.

|                                                                                                                                                         | Page.   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| List of wood-cuts .....                                                                                                                                 | xiii    |
| List of errata .....                                                                                                                                    | xv      |
| Letter of Dr. F. V. Hayden .....                                                                                                                        | xvii    |
| Introductory remarks .....                                                                                                                              | xix     |
| Cretaceous formation .....                                                                                                                              | xxi     |
| Section of Crétaceous formation on the Missouri .....                                                                                                   | xxiii   |
| General section of the Cretaceous rocks of Nebraska .....                                                                                               | xxiv    |
| Subdivisions of the Upper Missouri undoubted Cretaceous series, and their geographical extension west of the Mississippi, individually considered ..... | xxvi    |
| Dakota group .....                                                                                                                                      | xxviii  |
| Fort Benton group .....                                                                                                                                 | xxx     |
| Niobrara group .....                                                                                                                                    | xxxiii  |
| Fort Pierre group .....                                                                                                                                 | xxxv    |
| Fox Hills group .....                                                                                                                                   | xxxvii  |
| New Mexican Cretaceous section .....                                                                                                                    | xxxviii |
| Relations of the Upper Missouri Cretaceous beds to those east of the Mississippi .....                                                                  | xxxix   |
| Section of Cretaceous rocks of Mississippi .....                                                                                                        | xli     |
| Alabama section .....                                                                                                                                   | xlii    |
| New Jersey section .....                                                                                                                                | xliii   |
| Parallelism of the subdivisions of the Upper Missouri Cretaceous series with those of the same in Europe .....                                          | xlvi    |
| Fresh and brackish water lignite deposits of the Upper Missouri .....                                                                                   | xlvi    |
| Judith River group .....                                                                                                                                | lv      |
| Section of the Judith River group .....                                                                                                                 | lix     |
| Fort Union group .....                                                                                                                                  | lxi     |
| Section of the Fort Union .....                                                                                                                         | lxi     |
| Tertiary rocks of the Wind River and White River groups .....                                                                                           | lxii    |
| Wind River group .....                                                                                                                                  | 1       |
| White River group .....                                                                                                                                 | 1       |
| Section of the White River group .....                                                                                                                  | 509     |
| Invertebrate paleontology .....                                                                                                                         | 503     |
| Cretaceous species .....                                                                                                                                | 598     |
| Species of the fresh and brackish water lignite beds .....                                                                                              | 607     |
| Fossils of the Wind River Tertiary .....                                                                                                                |         |
| Fossils of the White River Tertiary .....                                                                                                               |         |
| Appendix .....                                                                                                                                          |         |

## CRETACEOUS.

## Radiata.

## Polypi.

## Actinaria.

## Fungiida.

- Micrabacia*, Edwards & Haime, 1849..... 1  
*M. americana*, M. & H., 1860, pl. xxviii, figs. 1 a-d..... 1-2

## Aleyonaria.

## Gorgoniida.

- Websteria*, Edwards & Haime, 1851..... 2-3  
*W. cretacea*, Meek, 1864, pl. xxviii, figs. 3 a-c..... 3-4  
*\* Microstizia*, n. g., Meek, 1876..... 4  
*M. millepunctata*, n. s., Meek, 1876, pl. xxviii, figs. 2 a-c..... 4

## Echinodermata.

## Echinoidea.

## Spatangida.

- Hemiaster*, Desor., 1847..... 5  
*H. humphreysanus*, M. & H., 1857, pl. x, figs. 1 a-g..... 5-6

## Mollusca.

## Brachiopoda.

## Lycopomata.

## Lingulida.

- Lingula*, Bruguiere, 1792..... 7-9  
*L. nitida*, M. & H., 1861, pl. xxviii, figs. 18 a, b..... 9-10

\* μικρός, small; στίγμα, puncture.

*Lamellibranchiata.*

*Monomyaria.*

*Ostreidae.*

|                                                                                                                                               |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <i>Ostrea</i> , Linnaeus, 1758 .....                                                                                                          | 10-11 |
| <i>Myostregia</i> , Fischer .....                                                                                                             | 11    |
| <i>Gryphaea</i> , Conrad .....                                                                                                                | 11    |
| <i>Ostrea</i> , sp. undt., pl. ii, figs. viii <i>a</i> and <i>b</i> .....                                                                     | 12-13 |
| <i>O. congesta</i> , Conrad, 1843, pl. ix, figs. 1 <i>a-f</i> .....                                                                           | 13-14 |
| <i>O. incornata</i> , M. & H., 1860, pl. x, fig. 4 .....                                                                                      | 14    |
| <i>O. pellucida</i> , M. & H., 1860, pl. xxviii, figs. 4 <i>a</i> and <i>b</i> .....                                                          | 15    |
| <i>O. (Gryphaea?) scabralata</i> , Meek, pl. xxviii, fig. 5 .....                                                                             | 15-16 |
| <i>O. (Gryphaea?) patina</i> , M. & H., 1856, pl. x, figs. 2 <i>a, b</i> ; <i>a, b</i> (bis), and 3 <i>e, f</i> ; also pl. xi varieties ..... | 16-18 |
| <i>Gryphaea</i> , Lamarck, 1801 .....                                                                                                         | 18    |
| <i>G. resicularis</i> , Lam. ? 1806, pl. xi, figs. 2 <i>a-c</i> , and pl. xvi, figs. 8 <i>a, b</i> .....                                      | 20-21 |

*Anomyidae.*

|                                                                               |       |
|-------------------------------------------------------------------------------|-------|
| <i>Anomia</i> , Linnaeus, 1767 .....                                          | 21-22 |
| <i>A. obliqua</i> , M. & H., 1860, pl. ix, fig. 2 .....                       | 21    |
| <i>A. ? subtrigonalis</i> , M. & H., 1860, pl. xvi, figs. 4 <i>a, b</i> ..... | 22-23 |

*Pectinidae.*

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| <i>Chlamys</i> , Bolten, 1798 .....                                       | 23-25 |
| <i>C. nebrascensis</i> , M. & H., 1856, pl. xvi, figs. 6 <i>a-c</i> ..... | 25-26 |
| <i>Synpectenoides</i> , Meek, 1864 .....                                  | 26-27 |
| <i>S. rigida</i> , H. & M., 1854, pl. xvi, figs. 5 <i>a, b</i> .....      | 27-28 |

*Heteromyaria.*

*Pteridae.*

|                                                                                                                                          |       |
|------------------------------------------------------------------------------------------------------------------------------------------|-------|
| <i>Pteria</i> , Scopoli, 1777 .....                                                                                                      | 28-32 |
| <i>Electrona</i> , Stoliczka .....                                                                                                       | 28    |
| <i>Pseudoptera</i> , Meek .....                                                                                                          | 29    |
| <i>Oxytoma</i> , Meek .....                                                                                                              | 29    |
| <i>P. linguiformis</i> , Evans & Shumard, sp., 1854, pl. xvi, figs. 1 <i>a-d</i> .....                                                   | 32-33 |
| <i>P. linguiformis</i> var. <i>subgibbosa</i> , pl. xxviii, fig. 12 .....                                                                | 33    |
| <i>P. haydeni</i> , H. & M., 1854, pl. xvi, figs. 2 <i>a, b</i> .....                                                                    | 33-34 |
| <i>P. (Oxytoma) nebrascana</i> , E. & S., 1857, pl. xvi, figs. 3 <i>a, b</i> , and pl. xxviii, fig. 11 .....                             | 34-36 |
| <i>P. (Pseudoptera) fibrosa</i> , M. & H., 1856, pl. xvii, figs. 17 <i>a-d</i> .....                                                     | 36-37 |
| <i>Inoceramus</i> , Sowerby, 1819 .....                                                                                                  | 38-41 |
| Subgenus <i>Inoceramus</i> .....                                                                                                         | 38-39 |
| <i>Mytiloides</i> , Brongniart .....                                                                                                     | 39    |
| <i>Catillus</i> (Brongniart) G. Chenu .....                                                                                              | 39    |
| <i>Actinoceramus</i> , Meek .....                                                                                                        | 39    |
| <i>Volvicceramus</i> , Stoliczka .....                                                                                                   | 40    |
| <i>I. (Inoceramus) fragilis</i> , H. & M., 1854, pl. v, fig. 5, and figs. 1 and 2, p. 42 .....                                           | 42-43 |
| <i>I. (Inoceramus) altus</i> , Meek, 1871, pl. xiv, figs. 1 <i>a, b</i> .....                                                            | 43-44 |
| <i>I. (Volviceramus) umbonatus</i> , M. & H., 1858, pl. iii, figs. 1 <i>a-c</i> , and pl. iv, figs. 1 <i>a-b</i> and 2 <i>a, b</i> ..... | 44-46 |
| <i>I. (Volviceramus) exogyroides</i> , M. & H., 1862, pl. v, figs. 3 <i>a-c</i> .....                                                    | 46-47 |
| Subgenus <i>Catillus</i> , Brong.                                                                                                        |       |
| <i>I. (Catillus) pertenuis</i> , M. & H., 1856, pl. xxxvii, figs. 3 <i>a, b</i> , and pl. xxxviii, figs. 3 <i>a, b</i> .....             | 47-48 |
| <i>I. (Catillus) crispus</i> ? var. <i>subcompressus</i> , M. & H., pl. xxxviii, fig. 2 <i>bis</i> .....                                 | 48-49 |
| <i>I. (Catillus) crispus</i> ? var. <i>barabini</i> , Morton, 1834, pl. xiii, figs. 1 <i>a-c</i> , and pl. xii, fig. 3, figs. 1-4 .....  | 49-50 |
| <i>I. (Catillus) convexus</i> , H. & M., 1854, pl. xii, figs. 5 <i>a</i> and <i>b</i> .....                                              | 51-52 |
| <i>I. (Catillus) sagensis</i> var. <i>nebrascensis</i> , Owen, 1852, pl. xiii, figs. 2 <i>a, b</i> .....                                 | 52-53 |
| <i>I. (Catillus) proximus</i> , Tuomey ? 1854, pl. xii, figs. 7 <i>a, b</i> .....                                                        | 53-55 |
| <i>I. (Catillus) proximus</i> ? var. <i>subcircularis</i> , Meek, pl. xii, figs. 2 <i>a, b</i> .....                                     | 55-56 |
| <i>I. (Catillus) bachei</i> , M. & H., 1860, pl. xv, figs. 1 <i>a, b</i> .....                                                           | 56    |
| <i>I. (Catillus) tenuilineatus</i> , H. & M., 1854, pl. xii, fig. 6 .....                                                                | 57    |
| <i>I. (Catillus) vanuxemi</i> , M. & H., 1860, pl. xiv, figs. 2 <i>a, b</i> .....                                                        | 57-58 |
| <i>I. (Catillus) sublaris</i> , H. & M., 1854, pl. xii, figs. 1 <i>a</i> and <i>b</i> .....                                              | 58-59 |
| <i>I. (Catillus) tenuirostris</i> , M. & H., 1862, fig. 5 .....                                                                          | 59    |
| <i>I. (Catillus) undabundus</i> , M. & H., 1862, pl. iii, figs. 2 <i>a, b</i> .....                                                      | 60-61 |
| <i>I. (Catillus) incurvatus</i> , M. & H., 1856, pl. xii, figs. 4 <i>a</i> and <i>b</i> .....                                            | 61    |
| Subgenus <i>Mytiloides</i> , Brong.                                                                                                      |       |
| <i>I. (Mytiloides) problematicus</i> , Schlot., pl. ix, figs. 3 <i>a, b</i> .....                                                        | 62    |

|                                                                                                          | Page.   |
|----------------------------------------------------------------------------------------------------------|---------|
| <i>I. (Mytiloides) problematicus</i> var. <i>aviculoides</i> , M. & H., 1860, pl. ix, fig. 4 .....       | 63-64   |
| <i>Gervillia</i> , DeFrance.                                                                             |         |
| <i>G. subtortuosa</i> , M. & H., 1856, pl. xvi, figs. 7 <i>a-c</i> .....                                 | 65-66   |
| <i>G. recta</i> , M. & H., 1861, pl. xxix, figs. 1 <i>a, b</i> .....                                     | 66-67   |
| <i>Mytilidæ</i> .                                                                                        |         |
| <i>Mytilus</i> , Linnaeus, 1758 .....                                                                    | 67-68   |
| <i>Aulacomya</i> , Mörch (= <i>Hormomya</i> , Mörch) .....                                               | 68      |
| <i>Stavelia</i> , Gray .....                                                                             | 68      |
| <i>M. subarcuatus</i> , M. & H., 1856, pl. xxxviii, figs. 2 <i>a, b</i> .....                            | 69      |
| <i>Folsella</i> , Scopoli, 1777 .....                                                                    | 69-71   |
| <i>Brachydontes</i> , Swainson .....                                                                     | 70      |
| <i>V. meekii</i> , E. & S., sp., 1857, pl. xv, figs. 3 <i>a-c</i> .....                                  | 72      |
| <i>V. galpiniana</i> , E. & S., sp., 1854, pl. xxviii, figs. 7 <i>a, b</i> .....                         | 73      |
| <i>V. attenuata</i> , M. & H., 1856, pl. xxviii, figs. 8 <i>a, b</i> .....                               | 74      |
| <i>Orenella</i> , Brown, 1827 .....                                                                      | 74-75   |
| <i>Modiolaria</i> , Beck .....                                                                           | 75      |
| <i>C. elegantula</i> , M. & H., 1861, pl. xxviii, figs. 6 <i>a-c</i> .....                               | 75-76   |
| <i>Dimyaria</i> .                                                                                        |         |
| <i>Arcidæ</i> .                                                                                          |         |
| <i>Barbatia</i> , Gray, 1840 .....                                                                       | 76-80   |
| <i>Polynema</i> , Conrad .....                                                                           | 78      |
| <i>Acar</i> , Gray .....                                                                                 | 78      |
| <i>Calloarca</i> , Gray .....                                                                            | 78      |
| <i>Striarca</i> , Conrad .....                                                                           | 78      |
| <i>Plagiarca</i> , Conrad .....                                                                          | 78      |
| ? <i>Granoarca</i> , Conrad (= ? <i>Oucullearea</i> , Conrad) .....                                      | 78      |
| <i>B. (Polynema ?) parallela</i> , Meek, 1872, pl. ii, fig. 10 .....                                     | 80-81   |
| <i>Nemodon</i> , Conrad, 1870 .....                                                                      | 81-82   |
| <i>N. sulcatinus</i> , Evans & Shum., sp., 1857, pl. xv, figs. 6 <i>a, b</i> .....                       | 82-83   |
| <i>Cucullæa</i> , Lamarek, 1801 .....                                                                    | 83-85   |
| <i>Idoncarca</i> , Conrad .....                                                                          | 84      |
| <i>Latiarca</i> , Conrad .....                                                                           | 84      |
| <i>C. (Idonearca) shumardi</i> , M. & H., 1856, pl. xxviii, figs. 15, <i>a-g</i> , and pl. xxix, fig. 4. | 86-87   |
| <i>C. (Idonearca) nebrascensis</i> , Owen, 1852, pl. xxix, figs. 5 <i>a, b</i> .....                     | 88-89   |
| <i>C. (Idonearca ?) cordata</i> , M. & H., 1856, pl. xxix, figs. 6 <i>a, b</i> .....                     | 89-90   |
| <i>Trigonarca</i> , Conrad, 1862 .....                                                                   | 90-91   |
| <i>Breviarca</i> , Conrad .....                                                                          | 91      |
| <i>T. (Breviarca ?) siouxensis</i> , H. & M., 1854, pl. i, fig. 6 .....                                  | 92      |
| <i>T. (Breviarca ?) salinensis</i> , Meek, pl. ii, figs. 1 <i>a-c</i> .....                              | 92-93   |
| <i>T. (Breviarca) exigua</i> , M. & H., 1856, pl. xv, figs. 2 <i>a-f</i> .....                           | 93-94   |
| <i>Arinca</i> , Poli, 1791 .....                                                                         | 94-95   |
| <i>A. subimbricata</i> , M. & H., 1860, pl. xxviii, figs. 14 <i>a-c</i> .....                            | 95-96   |
| <i>Limopsis</i> , Sassi, 1827 .....                                                                      | 96      |
| <i>L. parvula</i> , M. & H., 1856, pl. xxviii, figs. 17 <i>a-c</i> .....                                 | 97-98   |
| <i>Nuculidæ</i> .                                                                                        |         |
| <i>Nucula</i> , Lamarek, 1799 .....                                                                      | 98-99   |
| <i>Acila</i> , H. & A., Ad. ....                                                                         | 98      |
| <i>N. subplana</i> , M. & H., 1856, pl. xvii, figs. 7 <i>a, b</i> .....                                  | 99-100  |
| <i>N. obsoletistriata</i> , M. & H., 1856, pl. xv, figs. 10 <i>a, b</i> .....                            | 100-101 |
| <i>N. planimarginata</i> , M. & H., 1856, pl. xv, figs. 8 <i>a, b</i> , and pl. xxviii, fig. 16 .....    | 101-102 |
| <i>N. cancellata</i> , M. & H., 1856, pl. xxviii, figs. 13 <i>a-e</i> .....                              | 102-103 |
| <i>Ledidæ</i> .                                                                                          |         |
| <i>Nuculana</i> , Link, 1807 .....                                                                       | 103-104 |
| <i>N. bisulcata</i> , M. & H., 1864, pl. xv, figs. 4 <i>a, b</i> .....                                   | 104-105 |
| <i>N. subnasuta</i> , H. & M., 1854, pl. xv, fig. 9 .....                                                | 105-106 |
| <i>N. ? equilateralis</i> , M. & H., 1856, pl. xv, figs. 7 <i>a, b</i> .....                             | 106     |
| <i>Yoldia</i> , Möller, 1842 .....                                                                       | 107-108 |
| <i>Portlandia</i> , Mörch .....                                                                          |         |
| <i>Y. microdonta</i> , Meek, 1872, pl. ii, fig. 2 .....                                                  | 109     |
| <i>Y. scitula</i> , M. & H., 1856, pl. xxviii, fig. 9 .....                                              | 110     |
| <i>Y. cuneata</i> , M. & H., 1856, pl. xxviii, figs. 10 <i>a-c</i> .....                                 | 111     |
| <i>Y. ventricosa</i> , H. & M., 1854, pl. xv, figs. 5 <i>a, b</i> .....                                  | 112     |
| <i>Unionidæ</i> .                                                                                        |         |
| <i>Margaritana</i> , Schumacher, 1817 .....                                                              | 112-114 |
| <i>Alasmodonta</i> , Say .....                                                                           | 113     |

|                                                                                                           | Page.   |
|-----------------------------------------------------------------------------------------------------------|---------|
| <i>Complanaria</i> , Swainson .....                                                                       | 113     |
| <i>Unionopsis</i> , Swainson (= <i>Calceola</i> , Swainson, 1840; not Lam., 1799) .....                   | 113     |
| <i>M. nebrascensis</i> , Meek, 1871, pl. i, figs. 5 <i>a-c</i> .....                                      | 114-115 |
| <b>Crassatellidæ.</b>                                                                                     |         |
| <i>Crassatella</i> , Lamarck, 1801 .....                                                                  | 115-117 |
| Subgenus <i>Pachytharus</i> , Conrad, 1870 .....                                                          | 116     |
| <i>C. (Pachytharus) evansi</i> , H. & M., 1854, pl. xvii, figs. 6 <i>a-d</i> .....                        | 117-118 |
| <i>Crassatellina</i> , Meek, 1871 .....                                                                   | 118-129 |
| <i>C. oblonga</i> , Meek, 1871, pl. ii, figs. 3 <i>a-e</i> .....                                          | 120-121 |
| <i>Eriphyla</i> , Gabb, 1864 .....                                                                        | 121-124 |
| <i>E. gregaria</i> , M. & H., 1856, pl. xvii, figs. 9 <i>a, b</i> , figs. 6 and 7, p. 124 .....           | 124-126 |
| <b>Solemyidæ.</b>                                                                                         |         |
| <i>Solemya</i> , Lamarck, 1818 .....                                                                      | 126-129 |
| <i>S. subplicata</i> , M. & H., 1856, pl. xxviii, fig. 19 .....                                           | 129     |
| <b>Lucinidæ.</b>                                                                                          |         |
| <i>Lucina</i> , Bruguière, 1792 .....                                                                     | 130-133 |
| <i>Myrtea</i> , Turton, 1822 .....                                                                        | 130     |
| <i>Cyclas</i> , H. & A. Adams, 1857 (not Brug.) .....                                                     | 131     |
| <i>Milthia</i> , H. & A. Adams, 1857 .....                                                                | 131     |
| <i>L. subundata</i> , Hall & Meek, 1854, pl. xvii, figs. 2 <i>a-e</i> .....                               | 133-134 |
| <i>L. occidentalis</i> , Morton, 1842, pl. xvii, figs. 4 <i>a-d</i> .....                                 | 134-135 |
| <i>L. occidentalis</i> var. <i>ventricosa</i> , M. & H., 1860, pl. xvii, figs. 3 <i>a-c</i> .....         | 135-136 |
| <i>Sphaeriola</i> , Stoliczka, 1871 .....                                                                 | 136-137 |
| <i>S. ? cordata</i> , M. & H., 1857, pl. xxix, figs. 3 <i>a-c</i> .....                                   | 137-138 |
| <i>S. ? warrenana</i> , Meek .....                                                                        | 138     |
| <i>S. ? endotrachys</i> , Meek, pl. xxix, fig. 2 .....                                                    | 139     |
| <b>Tancredidæ.</b>                                                                                        |         |
| <i>Tancredia</i> , Lycett 1850 .....                                                                      | 140-142 |
| <i>T. americana</i> , M. & H., 1856, pl. xxxviii, figs. 1 <i>a-h</i> .....                                | 142-144 |
| <b>Glossidæ.</b>                                                                                          |         |
| <i>Cyprina</i> , Lamarck, 1812 .....                                                                      | 144-146 |
| <i>C. ovata</i> , M. & H., 1857, pl. xxix, figs. 7 <i>a-c</i> , and fig. 8, p. 146 .....                  | 146-147 |
| <i>C. ovata</i> var. <i>compressa</i> , M. & H., pl. xxx, fig. 11 .....                                   | 147     |
| <i>Veniella</i> , Stoliczka, 1870 (= <i>Venilia</i> , Morton; not of Duponchel, or Alder & Hanceek) ..... | 147-152 |
| <i>Veniliocardia</i> , Stoliczka, 1870 .....                                                              | 149     |
| <i>V. conradi</i> , Morton, figs. 9-11 .....                                                              | 148     |
| <i>V. goniophora</i> , n. s., Meek, 1876, pl. iv, fig. 4 and fig. 12, p. 152 .....                        | 152-153 |
| <i>V. mortoni</i> , M. & H., 1862, pl. iv, figs. 3 <i>a, b</i> .....                                      | 154     |
| <i>V. subtumida</i> , M. & H., 1857, pl. xvii, figs. 5 <i>a, b</i> .....                                  | 154-150 |
| <i>V. (Veniliocardia ?) humilis</i> , M. & H., 1860, pl. xxx, figs. 5 <i>a-c</i> .....                    | 155-156 |
| <b>Cyrenidæ.</b>                                                                                          |         |
| <i>Cyrena</i> , Lamarck, 1818 .....                                                                       | 157-158 |
| <i>Egeta</i> , H. & A. Adams, 1858 .....                                                                  | 157     |
| <i>Cyrena dakotensis</i> , M. & H., pl. i, figs. 1 <i>a-f</i> .....                                       | 159-160 |
| <i>Corbicula</i> , Mühlb. ldt. 1811 .....                                                                 | 160-163 |
| <i>Velutina</i> , Meek .....                                                                              | 161     |
| <i>Leptosthes</i> , Meek .....                                                                            | 161     |
| <i>C. ? nucalis</i> , Meek, 1872, pl. ii, figs. 5 <i>a, c</i> .....                                       | 163-164 |
| <i>C. ? subtrigonalis</i> , Meek, 1872, pl. ii, fig. 6 .....                                              | 164-165 |
| <b>Cardiidæ.</b>                                                                                          |         |
| <i>Cardium</i> , Linnaeus, 1758 (= <i>Acanthocardium</i> , Gray) .....                                    | 165-168 |
| <i>Pectunculus</i> (Adanson), Stoliczka; but not H. & A. Adams and others .....                           | 166     |
| <i>Trachycardium</i> , Mörch .....                                                                        | 166     |
| <i>Criocardium</i> , Conrad .....                                                                         | 166     |
| <i>Tropidocardium</i> , Roemer ( <i>Cardium</i> proper of most authors) .....                             | 166     |
| <i>Cerastoderma</i> (Poli), Mörch .....                                                                   | 166     |
| <i>Nemocardium</i> , Meek .....                                                                           | 167     |
| <i>C. (Criocardium) speciosum</i> , M. & H., 1856, pl. xxxvii, figs. 4 <i>a-c</i> .....                   | 169-170 |
| <i>C. kansascense</i> , Meek, 1871, pl. ii, figs. 14 <i>a-d</i> .....                                     | 170-171 |
| <b>Protocardia</b> , Beyrich, 1845 .....                                                                  | 171     |
| <i>Pachycardium</i> , Conrad .....                                                                        | 172     |
| <i>Lophocardia</i> , Meek .....                                                                           | 172     |
| Subgenus, <i>Protocardia</i> .....                                                                        | 172     |
| <i>P. (Protocardia) salinansis</i> , Meek, 1871, pl. ii, figs. 13 <i>a-c</i> .....                        | 174     |



|                                                                                                                                 | Page.   |
|---------------------------------------------------------------------------------------------------------------------------------|---------|
| Subgenus, <i>Leptocardia</i> , Meek, Section (a) .....                                                                          | 175     |
| <i>P. (Leptocardia) subquadrata</i> , E. & S., sp., 1857, pl. xxix, figs. 8 <i>a-e</i> .....                                    | 175     |
| <i>P. (Leptocardia) rara</i> , E. & S. sp., 1857, pl. xvii, figs. 1 <i>a-c</i> .....                                            | 176     |
| <i>P. (Leptocardia) ? pertenuis</i> , M. & H., 1861, figs. 13 and 14, p. 176 .....                                              | 176-177 |
| <b>Veneridae.</b>                                                                                                               |         |
| <i>Callista</i> , Poli, 1791 .....                                                                                              | 177     |
| <i>Callista</i> , Poli, typical (= <i>Ohione</i> Gray; not of Mühlfeldt) .....                                                  | 178     |
| <i>Dione</i> , Gray .....                                                                                                       | 178     |
| <i>Macrocallista</i> , Meek .....                                                                                               | 179     |
| <i>Pitar</i> , Roem. (= <i>Caryatis</i> , Roemer) .....                                                                         | 179     |
| <i>Aphrodina</i> , Conrad .....                                                                                                 | 179     |
| <i>? Dosiniopsis</i> , Conrad .....                                                                                             | 179     |
| <i>C. (Dosiniopsis) deweyi</i> , M. & H., 1856, pl. xvii, figs. 15 <i>a-e</i> .....                                             | 182-183 |
| <i>C. (Dosiniopsis) ovenana</i> , M. & H., 1856, pl. xxxvii, fig. 1 .....                                                       | 183-184 |
| <i>C. (Dosiniopsis) nebrascensis</i> , M. & H., 1856, figs. 15-17, p. 184 .....                                                 | 184-186 |
| <i>C. (Dosiniopsis) orbiculata</i> , H. & M., 1854, pl. v, figs. 2 <i>a-c</i> .....                                             | 186-187 |
| <i>C. ? pellucida</i> , M. & H., 1856, pl. xvii, figs. 10 <i>a-e</i> and figs. 12 <i>a-c</i> .....                              | 187-188 |
| <i>C. (Aphrodina ?) tenuis</i> , H. & M., pl. v, figs. 1 <i>a-d</i> .....                                                       | 188-189 |
| <i>Thetis</i> , Sowerby, 1826 .....                                                                                             | 189-190 |
| <i>T. ? circularis</i> , M. & H., 1856, pl. xvii, figs. 8 <i>a-c</i> and figs. 18, 19, p. 190 .....                             | 190-191 |
| <b>Tellinidae.</b>                                                                                                              |         |
| <i>Tellina</i> , Linnaeus, 1758 .....                                                                                           | 192-193 |
| <i>Tellinella</i> , Gray .....                                                                                                  | 193     |
| <i>Peronacoderma</i> (Poli), Mörch .....                                                                                        | 193     |
| <i>Moera</i> , H. & A. Adams (= <i>Donacilla</i> , Gray; not Lam) .....                                                         | 193     |
| <i>Palaeomocra</i> , Stoliczka .....                                                                                            | 193     |
| <i>Phylloda</i> , Schumacher .....                                                                                              | 193     |
| <i>Angulus</i> , Schumacher (= <i>Tellinula</i> , Chem., <i>Fabulina</i> , Gray) .....                                          | 193     |
| <i>Tellinides</i> , Lam .....                                                                                                   | 193     |
| <i>Homalina</i> , Stoliczka .....                                                                                               | 194     |
| <i>Peronea</i> , Poli (= <i>Omala</i> , Schum., corrected <i>Homala</i> , by Agassiz; also <i>Homala</i> , H. & A. Adams) ..... | 194     |
| <i>Metis</i> , H. & A. Adams .....                                                                                              | 194-195 |
| <i>T. (Cone ?) subscitula</i> , Meek, 1871, pl. ii, figs. 11 <i>a</i> and <i>b</i> .....                                        | 195-196 |
| <i>T. (Peronea ?) equilateralis</i> , M. & H., 1856, pl. xxxix, figs. 5 <i>a-c</i> .....                                        | 196-197 |
| <i>T. (Peronea ?) scitula</i> , M. & H., 1856, pl. xxx, figs. 1 <i>a, b</i> .....                                               | 197-198 |
| <i>Limaria</i> , Conrad, 1860 .....                                                                                             | 198-199 |
| <i>L. ? formosa</i> , M. & H., 1860, pl. xxx, fig. 2 .....                                                                      | 199-200 |
| <i>Arcopagella</i> , Meek, 1871 .....                                                                                           | 200-202 |
| <i>A. mactroides</i> , Meek, 1871, pl. ii, figs. 4 <i>a-d</i> .....                                                             | 202     |
| <i>A. ? macrodonta</i> , n. s., Meek, 1876, pl. i, fig. 2 .....                                                                 | 202-203 |
| <b>Mactridae.</b>                                                                                                               |         |
| <i>Mactra</i> , Linnaeus, 1767 .....                                                                                            | 203-204 |
| <i>Mactra</i> , Linn. (typical = <i>Trigonella</i> , da Costa) .....                                                            | 204     |
| <i>Cymbophora</i> , Gabb .....                                                                                                  | 204     |
| <i>Schizodesma</i> , Gray .....                                                                                                 | 204-206 |
| <i>Mactra (Cymbophora) ? siouxiensis</i> , M. & H., 1860, pl. i, figs. 7 <i>a-c</i> .....                                       | 206     |
| <i>M. (Cymbophora ?) formosa</i> , M. & H., 1856, pl. xxxix, fig. 7 .....                                                       | 207     |
| <i>M. (Cymbophora ?) warrenana</i> , M. & H., 1856, pl. xxx, figs. 7 <i>a-d</i> .....                                           | 208     |
| <i>M. (Cymbophora ?) gracilis</i> , M. & H., 1860, pl. xvii, figs. 18 <i>a, b</i> .....                                         | 209     |
| <i>M. (Cymbophora) alta</i> , M. & H., 1856, pl. xxxvii, figs. 2 <i>a, b</i> .....                                              | 210     |
| <i>M. (Cymbophora ?) nitidula</i> , M. & H., 1861, pl. xxx, figs. 6 <i>a-c</i> .....                                            | 211-213 |
| <b>Pholadomyidae.</b>                                                                                                           |         |
| <i>Pholadomya</i> , Sowerby, 1823 .....                                                                                         | 213-214 |
| <i>Procardia</i> , Meek .....                                                                                                   | 215-216 |
| <i>P. papyracea</i> , M. & H., 1862, pl. v, figs. 4 <i>a, b</i> .....                                                           | 217     |
| <i>P. subventricosa</i> , M. & H., 1857, pl. xxxix, figs. 8 <i>a, b</i> .....                                                   | 217-218 |
| Subgenus <i>Procardia</i> .....                                                                                                 | 219     |
| <i>P. (Procardia) hodgii</i> , Meek, 1871, pl. xiii, figs. 3 <i>a, b</i> .....                                                  | 219     |
| <i>Goniomya</i> , Agassiz, 1838 .....                                                                                           | 220-221 |
| <i>G. americana</i> , M. & H., 1856, pl. xxx, figs. 12 <i>a, b</i> .....                                                        | 121-122 |
| <b>Auatinae.</b>                                                                                                                |         |
| <i>Thracia</i> , Leach, 1819 .....                                                                                              | 222-223 |
| <i>T. ? subtorulosa</i> , M. & H., 1856, pl. xxxvii, fig. 5 .....                                                               | 223-224 |
| <i>T. gracilis</i> , M. & H., 1856, pl. xxxix, figs. 6 <i>a, b</i> .....                                                        | 224-225 |

|                                                                                                    | Page    |
|----------------------------------------------------------------------------------------------------|---------|
| <i>T. ? prouti</i> , M. & H., 1860, pl. xxxvii, figs. 6 <i>a, b</i> .....                          | 225-226 |
| <i>Liopistha</i> , Meek, 1864 .....                                                                | 227-236 |
| <i>Cymella</i> Meek .....                                                                          | 229     |
| <i>Psilomya</i> , Meek .....                                                                       | 229     |
| <i>L. protexta</i> , Conrad, figs. 20-24.....                                                      | 227     |
| <i>Cymellabella</i> , Conrad, figs. 25-30.....                                                     | 228     |
| Subgenus <i>Cymella</i> , Meek .....                                                               | 236     |
| <i>Liopistha (Cymella) undata</i> , M. & H., 1856, pl. xxxix, figs. 1 <i>a, b</i> .....            | 236-237 |
| <i>Neaera</i> , Gray, 1834.....                                                                    | 237-238 |
| <i>N. ventricosa</i> , M. & H., 1856, pl. xxx, figs. 3 <i>a-e</i> .....                            | 238-239 |
| <i>N. moreauensis</i> , M. & H., 1856, pl. xvii, figs. 11 <i>a-c</i> .....                         | 239-240 |
| <i>Corbulidae</i> .....                                                                            |         |
| <i>Corbula</i> , Bruguière, 1792 .....                                                             | 240-244 |
| <i>Anisorhynchus</i> , Conrad .....                                                                | 241     |
| <i>Pachyodon</i> (= <i>Pachydon</i> , Gabb. and <i>Anisothyris</i> , Conrad) .....                 | 241     |
| <i>Corbula crassimarginata</i> , M. & H., 1860, pl. xvii, figs. 14 <i>a-c</i> .....                | 244-245 |
| <i>C. inornata</i> , M. & H., 1856, pl. xxx, figs. 4 <i>a-d</i> .....                              | 245-246 |
| <i>Corbulomella</i> , M. & H., 1857.....                                                           | 246     |
| <i>C. gregaria</i> , M. & H., 1857, pl. xvii, figs. 13 <i>a-d</i> .....                            | 247     |
| <i>Saxicavidae</i> .....                                                                           |         |
| <i>Glycimeris</i> , Lamarek, 1799.....                                                             | 248-249 |
| <i>G. occidentalis</i> , M. & H., 1856, pl. xxxix, figs. 9 <i>a, b</i> .....                       | 250     |
| <i>Solenidae</i> .....                                                                             |         |
| <i>Pharella</i> , Gray, 1854.....                                                                  | 250-251 |
| <i>P. ? dakotensis</i> , M. & H., 1860, pl. i, fig. 3 .....                                        | 251-252 |
| <i>Leptosolen</i> , Conrad, 1867.....                                                              | 252-255 |
| <i>L. conradi</i> , Meek, 1872, pl. ii, figs. 12 <i>a, b</i> .....                                 | 253-254 |
| <i>Pholadidae</i> .....                                                                            |         |
| <i>Turnus</i> , Gabb, 1864 .....                                                                   | 254-256 |
| <i>Goniochasma</i> , Meek .....                                                                    | 255     |
| <i>Xylophagella</i> , Meek .....                                                                   | 255     |
| <i>T. (Goniochasma) stimpsoni</i> , M. & H., 1857, pl. xxx, figs. 9 <i>a, b</i> .....              | 256-257 |
| <i>T. (Xylophagella) elegantulus</i> , M. & H., 1857, pl. xxx, figs. 10 <i>a-e</i> .....           | 257-258 |
| <i>Martesia</i> , Leach, 1824 .....                                                                | 258-259 |
| <i>M. cuneata</i> , M. & H., 1858, pl. xxx, figs. 8 <i>a, b</i> .....                              | 259-260 |
| <i>Teredidae</i> .....                                                                             |         |
| <i>Teredo</i> , Linnæus, 1758.....                                                                 | 260-262 |
| <i>Calobates</i> , Gould .....                                                                     | 261     |
| <i>T. selliformis</i> , M. & H., 1860, pl. xvii, figs. 19 <i>a-d</i> .....                         | 262-263 |
| <i>T. globosa</i> , M. & H., 1858, pl. xxx, fig. 13 (burrows), figs. 31, 32, p. 264 .....          | 264-265 |
| <i>Gasteropoda</i> .....                                                                           |         |
| <i>Solenocoencha</i> .....                                                                         |         |
| <i>Dentaliidae</i> .....                                                                           |         |
| <i>Dentalium</i> , Linn., 1758 .....                                                               | 266     |
| <i>D. gracile</i> , H. & M., 1854, pl. xviii, figs. 13 <i>a-d</i> .....                            | 266-267 |
| <i>Entalis</i> , Sowerby, 1839.....                                                                | 267-268 |
| <i>E. paupercula</i> , M. & H., 1864, pl. xviii, fig. 14 .....                                     | 269     |
| <i>Tectibranchiata</i> .....                                                                       |         |
| <i>Bullidae</i> .....                                                                              |         |
| <i>Haminea</i> , Leach, 1847 .....                                                                 | 270-271 |
| <i>H. occidentalis</i> , M. & H., 1856, pl. xviii, figs. 11 <i>a, b</i> , and 12 <i>a, b</i> ..... | 271-272 |
| <i>H. subcylindrica</i> , M. & H., 1856, pl. xviii, figs. 10 <i>a, b</i> .....                     | 272-273 |
| <i>H. minor</i> , M. & H., 1856, pl. xxxi, figs. 1 <i>a, b</i> .....                               | 273     |
| <i>Cylichnidae</i> .....                                                                           |         |
| <i>Cylichna</i> , Lovén, 1846.....                                                                 | 274-275 |
| <i>Mnestia</i> , H. & A. Adams.....                                                                | 274     |
| <i>C. ? volvaria</i> , M. & H., 1856, pl. xxxi, figs. 2 <i>a, b</i> .....                          | 275-276 |
| <i>C. scitula</i> , M. & H., 1860, pl. xxxi, figs. 3 <i>a, b</i> .....                             | 276-277 |
| <i>Actæonidae</i> .....                                                                            |         |
| <i>Actæon</i> , Montfort, 1810 .....                                                               | 277-280 |
| <i>A. subellipticus</i> , M. & H., 1856, pl. xix, fig. 16 .....                                    | 280-281 |
| <i>A. attenuatus</i> , M. & H., 1858, pl. xix, figs. 17 <i>a, b</i> .....                          | 281-282 |
| <i>Ringiculidae</i> .....                                                                          |         |
| <i>Cinulia</i> , Gray, 1840 .....                                                                  | 282-283 |
| <i>Oligomycha</i> , Meek .....                                                                     | 283     |

|                                                                                                               | Page.    |
|---------------------------------------------------------------------------------------------------------------|----------|
| <i>Avellana</i> , d'Orbigny, 1843.....                                                                        | 283      |
| <i>Cinulia</i> ( <i>Oligoptycha</i> ) <i>concinna</i> , H. & M., sp., 1854, pl. xxxi, 6 bis. <i>a-c</i> ..... | 284      |
| <b>Pulmonata.</b>                                                                                             |          |
| <i>Siphonariidæ</i> .                                                                                         |          |
| <i>Anisomyon</i> , M. & H., 1860.....                                                                         | 285-288  |
| <i>A. borealis</i> , M. & H., 1860, pl. xviii, figs. 9 <i>a-e</i> .....                                       | 288-289  |
| <i>A. shumardi</i> , M. & H., 1860, pl. xviii, figs. 7 <i>a-c</i> .....                                       | 289-290  |
| <i>A. patelliformis</i> , M. & H., 1860, pl. xviii, figs. 5 <i>a-f</i> (not <i>d</i> and <i>e</i> ?).....     | 290-291  |
| <i>A. subovatus</i> , M. & H., 1856, pl. xviii, figs. 5 <i>d</i> and 6.....                                   | 291-292  |
| <i>A. alveolus</i> , M. & H., 1860, pl. xviii, figs. 4 <i>a, b</i> .....                                      | 292      |
| <i>A. scutellatus</i> , M. & H., 1860, pl. xviii, figs. 8 <i>a, b</i> .....                                   | 293      |
| <i>Docoglossa</i> .                                                                                           |          |
| <i>Acmaeidæ</i> .                                                                                             |          |
| <i>Acmaea</i> , Esch.                                                                                         |          |
| <i>A. occidentalis</i> , M. & H., 1860, pl. xviii, figs. 3 <i>a, b</i> .....                                  | 295-296  |
| <i>A. ? parva</i> , M. & H., 1860, pl. xviii, figs. 1 <i>a-c</i> , and fig. 2.....                            | 296      |
| <i>A. ? papillata</i> , M. & H., 1860, pl. xxxi, figs. 4 <i>a, b</i> .....                                    | 296-297  |
| <i>Rhipidoglossa</i> .                                                                                        |          |
| <i>Trochidæ</i> .                                                                                             |          |
| <i>Margarita</i> , Leach, 1819.....                                                                           | 298      |
| <i>M. nebrascensis</i> , M. & H., 1860, pl. xix, figs. 8 <i>a, b</i> , 9 <i>a, b</i> .....                    | 298, 299 |
| <i>M. mudgeana</i> , Meek, 1871, pl. ii, figs. 9 <i>a, b</i> .....                                            | 300      |
| <i>Margaritella</i> , M. & H., 1860.....                                                                      | 300-302  |
| <i>M. flexistriata</i> , E. & S., 1854, pl. xix, figs. 11 <i>a-d</i> .....                                    | 302      |
| <i>Pectinibranchiata</i> .                                                                                    |          |
| <i>Tritonidæ</i> .                                                                                            |          |
| <i>Trachyriton</i> , Meek, 1864.....                                                                          | 303-304  |
| <i>T. vinclunum</i> , H. & M., sp., 1856, pl. xix, figs. 7 <i>a-d</i> .....                                   | 304-306  |
| * <i>Olosteriscus</i> , n. g., Meek, 1876.....                                                                | 306-307  |
| <i>O. tenuilineatus</i> , H. & M., sp., 1856, pl. xix, figs. 10 <i>a, b</i> , and 9 <i>c</i> .....            | 308-309  |
| <i>Naticidæ</i> .                                                                                             |          |
| <i>Gyrodes</i> , Conrad, 1860.....                                                                            | 309-310  |
| <i>G. conradi</i> , Meek, figs. 33-36, p. 310.....                                                            | 310-311  |
| <i>Lunatia</i> , Gray, 1847.....                                                                              | 311-314  |
| <i>L. concinna</i> , H. & M., sp., 1854, pl. xxxii, figs. 11 <i>a-c</i> .....                                 | 314-315  |
| <i>L. occidentalis</i> , M. & H., 1856, pl. xxxii, figs. 12 <i>a-c</i> .....                                  | 315-316  |
| <i>L. suberussa</i> , M. & H., 1856, pl. xxxix, figs. 3 <i>a-c</i> .....                                      | 316-317  |
| <i>Anatropsis</i> , Mörch, 1857.....                                                                          | 317-318  |
| <i>A. paludinaeformis</i> , H. & M., sp., 1854, pl. xix, figs. 15 <i>a-c</i> .....                            | 318-319  |
| <i>Aporrhaidæ</i> .                                                                                           |          |
| <i>Aporrhais</i> , Dillwyn, 1823.....                                                                         | 320-322  |
| <i>Alipes</i> , Conrad, 1865 (= <i>Goniocheila</i> , Gabb).....                                               | 320      |
| <i>Archope</i> , Gabb, 1868.....                                                                              | 321      |
| <i>Aporrhais biangulata</i> , M. & H., 1856, pl. xix, figs. 6 <i>a-c</i> .....                                | 322-323  |
| <i>Anchura</i> , Conrad, 1860.....                                                                            | 324      |
| <i>Drepanochilus</i> , Meek, 1864 (= <i>Perissoptera</i> , Tate, in part).....                                | 324      |
| <i>A. (Drepanochilus) americana</i> , E. & S., sp., 1857, pl. xxxii, figs. 8 <i>a, b</i> .....                | 325-326  |
| <i>A. (Drepanochilus) nebrascensis</i> , E. & S., sp., 1854, pl. xix, figs. 5 <i>a-c</i> .....                | 326-327  |
| <i>A. ? subleris</i> , M. & H., 1860, pl. xix, figs. 3 <i>a, b</i> .....                                      | 327-328  |
| <i>A. ? patra</i> , M. & H., 1860, pl. xix, figs. 4 <i>a, b</i> .....                                         | 328      |
| <i>Vanikoridæ</i> .                                                                                           |          |
| <i>Vanikoro</i> , Quoy & Gaim. 1832.....                                                                      | 329      |
| <i>V. ambigua</i> , M. & H., 1856, pl. xix, figs. 12 <i>a-d</i> .....                                         | 330, 331 |
| <i>Vanikoropsis</i> ,† n. g., Meek, 1876.....                                                                 | 331      |
| <i>V. tuomeyana</i> , M. & H., sp., 1856, pl. xxxix, figs. 2 <i>a, b</i> .....                                | 332      |
| <i>Turritellidæ</i> .                                                                                         |          |
| <i>Mesalia</i> , Gray, 1842.....                                                                              | 332-333  |
| <i>M. kansasensis</i> , Meek, 1871, pl. ii, figs. 7 <i>a, b</i> .....                                         | 333-334  |
| <i>Cerithiopsidæ</i> .                                                                                        |          |
| <i>Cerithiopsis</i> , Forbes & Hanley, 1849.....                                                              | 334-335  |
| <i>Alaba</i> , H. & A. Adams, 1853.....                                                                       | 335      |
| <i>Seila</i> , A. Adams, 1861.....                                                                            | 335      |
| <i>Cerithiopsis moreauensis</i> , M. & H., 1856, pl. xxxi, fig. 4 (not 4 <i>a, b</i> ), fig. 38, p. 336.....  | 336-337  |

\* κλωστήρ, a spindle (diminutive of).

† Vanikoro; ὄψις, form.

|                                                                                                                                    | Page.    |
|------------------------------------------------------------------------------------------------------------------------------------|----------|
| <i>Pyramidellidæ.</i>                                                                                                              |          |
| <i>Chemnitzia</i> , d'Orbigny, 1850.....                                                                                           | 337-339  |
| <i>O. cerithiformis</i> , M. & H., sp., 1856, pl. xxxii, figs. 10 <i>a, b</i> .....                                                | 339-341  |
| <i>Littorinidæ.</i>                                                                                                                |          |
| <i>Spironema</i> , Meek, 1864.....                                                                                                 | 341-342  |
| <i>S. tenuilineata</i> , M. & H., sp., 1856, pl. xxxii, figs. 9 <i>a-c</i> .....                                                   | 342-343  |
| <i>Muricidæ.</i>                                                                                                                   |          |
| <i>Pyropis</i> , Conrad, 1858.....                                                                                                 | 343-345  |
| <i>Neptunella</i> , Meek, 1864 (not Gray).....                                                                                     | 344      |
| <i>Pyrifusus</i> ( <i>Neptunella</i> ) <i>newberryi</i> , M. & H., 1856, pl. xxxi, fig. 6 <i>a-f</i> , fig. 39, p. 346.....        | 346-347  |
| <i>P.</i> ( <i>Neptunella</i> ) <i>subturritus</i> , M. & H., sp., 1857, pl. xxxii, figs. 3 <i>a, b</i> , and fig. 40, p. 347..... | 347-348  |
| <i>P.</i> ( <i>Neptunella</i> ) <i>intertextus</i> , M. & H., sp., 1857, pl. xix, figs. 14 <i>a, b</i> .....                       | 348-349  |
| <i>Buccinidæ.</i>                                                                                                                  |          |
| ? <i>Pseudobuccinum</i> , M. & H., 1856.....                                                                                       | 349-350  |
| <i>P. nebrascense</i> , M. & H., 1856, pl. xxxi, figs. 5 <i>a-d</i> .....                                                          | 350-351  |
| <i>Obovatus</i> , n. g., Meek, 1876.....                                                                                           | 351-352  |
| <i>O. constricta</i> , H. & M., sp., 1856, figs. 41, 42, p. 353.....                                                               | 352-354  |
| <i>Fasciolaridæ.</i>                                                                                                               |          |
| <i>Fasciolaria</i> , Lamarck, 1799.....                                                                                            | 355-358  |
| <i>Terebrispira</i> , Conrad, 1862.....                                                                                            | 356      |
| <i>Piestochilus</i> , Meek, 1864.....                                                                                              | 356      |
| <i>Mesorhytis</i> , Meek.....                                                                                                      | 356      |
| <i>Cryptorhytis</i> , Meek.....                                                                                                    | 356      |
| <i>Fasciolaria buccinoides</i> , M. & H., 1856, pl. xxxi, figs. 8 <i>a-d</i> .....                                                 | 358-359  |
| <i>F.</i> ( <i>Piestochilus</i> ) <i>scarboroughi</i> , M. & H., 1857, pl. xxxii, figs. 4 <i>a-d</i> .....                         | 359-360  |
| <i>F.</i> ( <i>Piestochilus</i> ) <i>culbertsoni</i> , M. & H., 1856, pl. xxxii, figs. 1 <i>a-f</i> , fig. 44, p. 360.....         | 360-362  |
| <i>F.</i> ( <i>Piestochilus</i> ) <i>galpiniana</i> , M. & H., sp., 1856, pl. xxxii, figs. 2 <i>a, b</i> .....                     | 362-363  |
| <i>F.</i> ( <i>Piestochilus</i> ) <i>cretacea</i> , M. & H., 1856, pl. xxxi, figs. 11 <i>a, b</i> .....                            | 363-364  |
| <i>F.</i> ? ( <i>Mesorhytis</i> ) <i>gracilentia</i> , Meek, fig. 45, p. 364.....                                                  | 364-365  |
| <i>F.</i> ? ( <i>Cryptorhytis</i> ) <i>cheyennensis</i> , M. & H., sp., 1860, pl. xix, figs. 13 <i>a, b</i> .....                  | 365-366  |
| <i>F.</i> ? ( <i>Cryptorhytis</i> ) <i>flexicostata</i> , M. & H., sp., pl. xix, fig. 2 and fig. 46, p. 367.....                   | 367-368  |
| <i>Pyropsis</i> , Conrad, 1860.....                                                                                                | 368-39   |
| <i>P. bairdi</i> , M. & H., sp., 1856, pl. xxxi, figs. 10 <i>a, b</i> .....                                                        | 369-379  |
| <i>P. bairdi</i> var. <i>rotula</i> , Meek, pl. xxxi, fig. 10 and fig. 47, p. 371.....                                             | 371-372  |
| <i>Fusus</i> , Bruguière, 1789.....                                                                                                | 372-374  |
| <i>Serrifusus</i> , Meek.....                                                                                                      | 373      |
| <i>Sinistralia</i> , H. & A. Adams, 1853.....                                                                                      | 373      |
| <i>Fusus</i> ? ( <i>Serrifusus</i> ) <i>dakotensis</i> , M. & H., 1856, pl. xxxi, fig. 11 and pl. 32, figs. 6 <i>a, b</i> .....    | 374, 375 |
| <i>F.</i> ? ( <i>Serrifusus</i> ) <i>dakotensis</i> , var., pl. xxxii, fig. 7 <i>a</i> and 7 <i>b</i> ?.....                       | 375-377  |
| <i>Cantharus</i> , Bolten, 1798.....                                                                                               | 377-379  |
| <i>Tritonidea</i> , Swainson, 1840.....                                                                                            | 378      |
| <i>Cantharulus</i> , Meek.....                                                                                                     | 378      |
| <i>C.</i> ( <i>Cantharulus</i> ) <i>vaughani</i> , M. & H., sp., pl. xxxii, figs. 5 <i>a, b</i> , and fig. 48, p. 379.....         | 379-380  |
| <i>Pleurotomidæ.</i>                                                                                                               |          |
| <i>Turris</i> , Bolten, 1798.....                                                                                                  | 380-384  |
| <i>Surcula</i> , H. & A. Adams, 1853 (= <i>Turricula</i> , Schum.; not of others).....                                             | 381      |
| <i>Surculites</i> , Conrad, 1863.....                                                                                              | 382      |
| <i>Genota</i> , H. & A. Adams, 1853 (not Adanson).....                                                                             | 382      |
| <i>T. minor</i> , E. & S., sp. 1857, pl. xxxi, figs. 9 <i>a-c</i> .....                                                            | 384-385  |
| <i>T.</i> ( <i>Surcula</i> )? <i>contortus</i> , M. & H., 1856, pl. xxxi, figs. 7 <i>a-c</i> , fig. 49, p. 385.....                | 385-386  |
| <i>T.</i> ( <i>Surcula</i> )? <i>hitzi</i> , Meek, fig. 50, p. 387.....                                                            | 386-388  |
| <i>Cephalopoda.</i>                                                                                                                |          |
| <i>Tetrabranchiata.</i>                                                                                                            |          |
| <i>Baculitidæ.</i>                                                                                                                 |          |
| <i>Baculites</i> , Lamarck, 1799.....                                                                                              | 391-394  |
| <i>Cyrtochilu</i> , Meek.....                                                                                                      | 392      |
| <i>B. ovatus</i> , Say, 1821, pl. xx, figs. 2 <i>a, b, d</i> , and 1 <i>a, b</i> , and fig. 52, p. 397.....                        | 394-397  |
| <i>B. grandis</i> , H. & M., 1854, pl. xxxiii, figs. 1 <i>a-c</i> and fig. 53, p. 399 and fig. 54, p. 400.....                     | 398-400  |
| <i>B. compressus</i> , Say, 1821, pl. xx, figs. 3 <i>a-c</i> and figs. 55, 56, p. 403.....                                         | 400-404  |
| <i>B. asper</i> , Morton? 1824, pl. xxxix, figs. 10 <i>a, d</i> (not <i>b, c</i> ).....                                            | 404-405  |
| <i>B. anceps</i> var. <i>obtusus</i> , figs. 57-60, p. 406.....                                                                    | 406-408  |



|                                                                                                                 | Page.   |
|-----------------------------------------------------------------------------------------------------------------|---------|
| <i>Ancyloceratidae.</i>                                                                                         |         |
| <i>Ancyloceras</i> , d'Orbigny, 1841.....                                                                       | 408-409 |
| <i>A. ? unicum</i> , M. & H., 1858, pl. xxi, figs. 1 <i>a, b</i> .....                                          | 409-410 |
| <i>Ptychoceratidae.</i>                                                                                         |         |
| <i>Ptychoceras</i> , d'Orbigny, 1841.....                                                                       | 410-412 |
| <i>P. mortoni</i> , M. & H., 1857, pl. xx, figs. 4, <i>a-c</i> .....                                            | 412-413 |
| <i>Scaphitidae.</i>                                                                                             |         |
| <i>Scaphites</i> , Parkinson, 1811.....                                                                         | 413-418 |
| <i>Macroscaphites</i> , Meek.....                                                                               | 414     |
| <i>Scaphites</i> , Parkinson.....                                                                               | 414     |
| <i>Discoscaphites</i> , Meek, 1872.....                                                                         | 15      |
| <i>S. larvæformis</i> , M. & H., 1856, pl. vi, figs. 6 <i>a-c</i> .....                                         | 418-419 |
| <i>S. warreni</i> , M. & H., 1860, pl. vi, fig. 5 and figs. 61, 62, p. 421.....                                 | 420-423 |
| <i>S. vermiformis</i> , M. & H., 1862, pl. vi, figs. 4 <i>a, b</i> .....                                        | 423-425 |
| <i>S. ventricosus</i> , M. & H., 1862, pl. vi, figs. 7 <i>a, b</i> , and figs. 8 <i>a, b</i> .....              | 425-426 |
| <i>S. nodosus</i> var. <i>brevis</i> , pl. xxv, figs. 1 <i>a-c</i> .....                                        | 426-428 |
| <i>S. nodosus</i> var. <i>quadrangularis</i> , pl. xxv, figs. 3 <i>a-c</i> , 2 <i>a-c</i> and fig. 4.....       | 428-429 |
| <i>S. nodosus</i> var. <i>plenus</i> , pl. xxvi, figs. 1 <i>a-c</i> .....                                       | 429-430 |
| <i>S. (Discoscaphites) conradi</i> , Morton, sp., 1834, pl. xxxvi, figs. 2 <i>a-e</i> .....                     | 430-432 |
| <i>S. (Discoscaphites) conradi</i> , var. <i>gulosus</i> , Morton, 1834, pl. xxxvi, fig. 1.....                 | 432-433 |
| <i>S. (Discoscaphites) conradi</i> , var. <i>intermedius</i> , pl. xxxiv, figs. 3 <i>a-c</i> .....              | 433-435 |
| <i>S. (Discoscaphites) nicoleitii</i> , Morton, sp., 1841, pl. xxxiv, figs. 4 <i>a-c</i> and 2 <i>a-b</i> ..... | 435-436 |
| <i>S. (Discoscaphites) cheyennensis</i> , Owen, sp., 1852, pl. xxxv, figs. 3 <i>a-i</i> .....                   | 437-441 |
| <i>S. (Discoscaphites) abyssinus</i> , Morton, sp., 1841, pl. xxxv, figs. 2 <i>a, b</i> and 4.....              | 441-443 |
| <i>S. (Discoscaphites) mandanensis</i> , Morton, sp., 1841, pl. xxxv, figs. 1 <i>a-c</i> .....                  | 443-444 |
| <i>Ammonitidae.</i>                                                                                             |         |
| <i>Ammonites</i> , Brug., 1789.....                                                                             | 445-447 |
| <i>A. complexus</i> , H. & M., 1854, pl. xxiv, figs. 1 <i>a-c</i> .....                                         | 447-448 |
| <i>Mortoniceras</i> , n. g., Meek, 1876.....                                                                    | 448-449 |
| <i>M. shoshonense</i> , Meek, pl. vi, figs. 3 <i>a, c</i> and 6 <i>b</i> .....                                  | 449-450 |
| <i>M. ? vermillionense</i> , M. & H., 1860, pl. vii, fig. 2 <i>a, b</i> .....                                   | 450-452 |
| <i>Prionocyclus</i> , Meek, 1872.....                                                                           | 452-455 |
| <i>Prionotropis</i> , Meek.....                                                                                 | 453     |
| <i>P. (Prionotropis) woolgari</i> , Mantell, sp., 1822, pl. vii, figs. 1 <i>a-h</i> , and pl. vi, fig. 2.....   | 455-457 |
| <i>Phylloceras</i> , Suess, 1865.....                                                                           | 453     |
| <i>P. ? halli</i> , M. & H., 1856, pl. xxiv, figs. 3 <i>a-c</i> and fig. 64, p. 458.....                        | 458-462 |
| <i>Placenticeras</i> , Meek, 1870.....                                                                          | 462-464 |
| <i>Sphenodiscus</i> , Meek, 1872.....                                                                           | 463     |
| <i>P. placenta</i> , DeKay, sp., 1828, pl. xxiv, figs. 2 <i>a, b</i> and fig. 65, p. 466.....                   | 465-468 |
| <i>P. placenta</i> var. <i>intercalare</i> , pl. xxiii, figs. 1 <i>a-c</i> .....                                | 468-472 |
| <i>P. (Sphenodiscus) lenticulare</i> , Owen, sp., 1852, pl. xxxiv, figs. 1 <i>a-c</i> , fig. 66, p. 473.....    | 473-476 |
| <i>Turritulidae.</i>                                                                                            |         |
| <i>Heteroceras</i> , d'Orbigny, 1849.....                                                                       | 477-478 |
| <i>H. ? cochleatum</i> , H. & M., pl. xxii, figs. 2 <i>a, b</i> .....                                           | 478-479 |
| <i>H. ? nebrascense</i> , M. & H., 1856, pl. xxii, figs. 1 <i>a-c</i> .....                                     | 480-481 |
| <i>H. tortum</i> , M. & H., 1858, pl. xxii, figs. 4 <i>a-c</i> .....                                            | 481-482 |
| <i>H. ? umbilicatum</i> , M. & H., 1858, pl. xxii, fig. 5.....                                                  | 482-483 |
| <i>H. ? cheyennense</i> , M. & H., 1856, pl. xxi, figs. 2 <i>a, b</i> .....                                     | 483-484 |
| <i>H. ? angulatum</i> , M. & H., 1860, pl. xxi, figs. 3 <i>a-c</i> .....                                        | 484-485 |
| <i>Helicoceras</i> , d'Orbigny, 1840.....                                                                       | 485-487 |
| <i>Palæoceras</i> , Meek.....                                                                                   | 485     |
| <i>Helicoceras mortoni</i> var. <i>tenuicostatum</i> , pl. xxii, figs. 3 <i>a-c</i> .....                       | 487-489 |
| <i>Nautilidae.</i>                                                                                              |         |
| <i>Nautilus</i> , Linnaeus, 1758.....                                                                           | 489-495 |
| <i>Tennochilus</i> , McCoy, 1844.....                                                                           | 496     |
| <i>Trematodiscus</i> , M. & W., 1861.....                                                                       | 491     |
| <i>Discites</i> (De Hann), McCoy, 1825.....                                                                     | 491     |
| <i>Solenochilus</i> , M. & W., 1870 (= <i>Oryptoceras</i> , d'Orbigny).....                                     | 491     |
| <i>Hercoglossa</i> , Conrad, 1866 (= <i>Aganides</i> , Montfort ?).....                                         | 491     |
| <i>Pseudonautilus</i> , Meek.....                                                                               | 491     |
| <i>N. dekayi</i> , Morton, 1834, pl. xxvii, figs. 1 <i>a-e</i> and fig. 67, p. 496.....                         | 496-498 |
| <i>N. dekayi</i> var. <i>moanoensis</i> , pl. xxvii, figs. 2 <i>a-e</i> .....                                   | 498     |
| <i>N. elegans</i> , Sowerby, 1816, pl. viii, figs. 2 <i>a-c</i> .....                                           | 499-501 |

*Dibranchiata.*

*Belemnitidae.*

*Belemnitella*, d'Orbigny, 1840 ..... 501-503

*B. bulbosa*, M. & H., 1856, pl. xxxiii, figs. 2 *a-e* ..... 504

*Teuthidae.*

*Phylloteuthis*, M. & H., 1860, ..... 505

*P. subovata*, M. & H., 1860, pl. xxxiii, fig. 3 ..... 505-506

*Articulata.*

*Annulata.*

*Tubicola.*

*Serpulidae.*

*Serpula*, Linnaeus, 1758 ..... 506-507

*S. ? tenuicarinata*, M. & H., 1857, pl. vi, fig. 1 ..... 507-508

SPECIES OF THE FRESH AND BRACKISH WATER LIGNITE BEDS.

*Mollusca.*

*Lamellibranchiata.*

*Monomyaria.*

*Ostreidae.*

*O. trea*, Linnaeus ..... 509

*O. subtrigonalis*, E. & S. ? 1857, pl. xl, figs. 1 *a-d*... 510

*Dimyaria.*

*Unionidae.*

*Unio*, Retzius, 1788 ..... 511-515

*Bariosta*, Raf., 1820 (= *Potamida*, Swainson) ..... 513

*Naiæa*, Swainson, 1840 ..... 514

*Obovaria*, Raf., 1819 (= *Rhipidodonta*, Mörch) ..... 514

*Niæa*, Swainson, 1837 ..... 514

*Hyridella*, Swainson ..... 514

*Lampsilis*, Raf., 1820 (= *Truncilla*, *Pleurobema*, *Syntoxia*, *Scalenaria*, and

*Plagiola*, Raf.; *Orenodonta*, Schlüt.; *Eglia*, Swainson) ..... 514

*Canthya*, Swainson, 1840 ..... 514

*Iridea*, Swainson, 1840 (= *Tritigonia* and *Orthonymus*, Agassiz) ..... 514

*Rotundaria*, Raf., 1820 (= *Cyprogenia*, Agassiz) ..... 514

*Quadrula*, Raf., 1820 (= *Theliderma*, Swainson) ..... 514

*Diplodon*, Spix, 1827 (= *Cucumaria*, Conrad, and *Naiæa*, Swainson) ..... 514

*Dysnomia*, Agassiz, 1852 ..... 514

*Metaptera*, Raf., 1820 (= *Proptera*, Raf., and *Lymnadia* and *Megadomus*, Swain-

son) ..... 517

*U. priscus*, M. & H., 1856, pl. xliii, figs. 8 *a-d* ..... 516-517

*U. danae*, M. & H., 1857, pl. xli, figs. 3 *a-c* ..... 517-518

*U. subspatulatus*, M. & H., 1857, pl. xli, figs. 1 *a, b* ..... 518-519

*U. deoeyanus*, M. & H., 1857, pl. xli, figs. 2 *a-c* ..... 519

*Cyrenidae.*

*Carbicula*, Mühlfeldt ..... 520

*C. cytheriformis*, M. & H., 1860, pl. xl, figs. 5 *a-e* ..... 520-521

*C. occidentalis*, M. & H., 1856, pl. xl, figs. 6 *a-c* ..... 521-522

*C. nebrascensis*, M. & H., 1860, pl. lxiii, figs. 2 *a, b* (not 2 *c*) ..... 522

Subgenus *Leptesthes* ..... 523

*C. (Leptesthes) subelliptica*, M. & H., 1856, pl. xliii, figs. 9 *a-c* ..... 523-524

*C. (Leptesthes) subelliptica* var. *moreauensis*, pl. xliii, figs. 1 *a, b* and 2 *c* ..... 524

*Sphærium*, Scopoli, 1777 ..... 525

*S. planum*, M. & H., 1860, pl. xliii, figs. 6 *a, b* ..... 526

*S. formosum*, M. & H., 1860, pl. xliii, figs. 4 *a-c* ..... 526-527

*S. subellipticum*, M. & H., 1860, pl. xliii, figs. 5 *a, b* ..... 527

*S. recticardinale*, M. & H., 1860, pl. xliii, figs. 3 *a, b* ..... 527-528

*Corbulidae.*

*Corbula*, Bruguière ..... 528

*Pachyodon*, Gabb ..... 528

*C. (Pachyodon) mactriformis*, M. & H., 1856, pl. xliii, figs. 7 *a-f* ..... 528-529

*C. (Pachyodon) subtrigonalis*, M. & H., 1856, pl. xl, figs. 3 *a, b* ..... 529-530

*C. (Pachyodon) perundata*, M. & H., 1856, pl. xl, figs. 4 *a-d* ..... 530-531

*Gasteropoda.*

*Pulmonata.*

*Limnæidae.*

*Limnæa*, Lamarek, 1799 ..... 531-533

*Radix*, Montfort, 1810 (= *Gulnaria*, Leach) ..... 532

|                                                                                                                                | Page.   |
|--------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Polyrrhytis</i> , Meek.....                                                                                                 | 532     |
| <i>Bulinnea</i> , Haldeman, 1842.....                                                                                          | 532     |
| <i>Linnophysa</i> , Fitzinger, 1833 (= <i>Stagnicola</i> , Leach & Galba, Schranck).....                                       | 533     |
| <i>Omphiscola</i> , Raf. (= <i>Leptolinnea</i> , Swainson).....                                                                | 533     |
| <i>Acella</i> , Haldeman, 1842.....                                                                                            | 533     |
| <i>Pleurolimnea</i> , Meek, 1866.....                                                                                          | 533     |
| <i>L.</i> ( <i>Pleurolimnea</i> ) <i>tenuicostata</i> , M. & H., 1856, pl. xlv, figs. 13 <i>a-c</i> .....                      | 534     |
| <i>Planorbis</i> , Müller, 1776.....                                                                                           | 534-536 |
| <i>Helicoma</i> , Swainson, 1849.....                                                                                          | 535     |
| <i>Planorbella</i> , Haldeman, 1842.....                                                                                       | 536     |
| <i>Taphius</i> , H. & A. Adams, 1856.....                                                                                      | 536     |
| <i>Menetus</i> , H. & A. Adams, 1856 (= <i>Anisus</i> , Beck, not Fitz.).....                                                  | 536     |
| <i>Anisus</i> , Fitzinger, 1833 (= <i>Tropidiscus</i> , Stein.).....                                                           | 536     |
| <i>Bathyomphalus</i> , Agassiz, 1837 (= <i>Spirorbis</i> , Swainson, not Lamarck).....                                         | 536     |
| <i>Gyrulus</i> , Agassiz (= <i>Nautilina</i> , Stein.).....                                                                    | 536     |
| <i>P. convolutus</i> , M. & H., 1856, pl. xlii, figs. 12 <i>a, b</i> .....                                                     | 536-537 |
| <i>P. convolutus</i> var., pl. xlii, figs. 11 <i>a-c</i> .....                                                                 | 538     |
| <i>P.</i> ( <i>Bathyomphalus</i> ) <i>planoconvexus</i> , M. & H., 1857, pl. xlv, figs. 9 <i>a-c</i> .....                     | 538-539 |
| <i>P.</i> ( <i>Bathyomphalus</i> ) <i>amplexus</i> , M. & H., 1857, pl. lxii, figs. 16 <i>a-e</i> .....                        | 539     |
| <i>Physidae.</i>                                                                                                               |         |
| <i>Bulinus</i> , O. F. Müller, 1781.....                                                                                       | 540     |
| <i>B. subelongatus</i> , M. & H., 1856, pl. lxii, figs. 13 <i>a, b</i> .....                                                   | 540-541 |
| <i>B. longiusculus</i> , M. & H., 1856, pl. lxiii, figs. 16 <i>a, b</i> .....                                                  | 541-542 |
| <i>B. rhomboideus</i> , M. & H., 1856, pl. lxiii, fig. 17.....                                                                 | 542     |
| <i>Ancylidae.</i>                                                                                                              |         |
| <i>Acerozus</i> , Beck, 1837.....                                                                                              | 543     |
| <i>A. minutus</i> , M. & H., 1856, pl. xlv, fig. 10.....                                                                       | 543-544 |
| <i>Vitrinidae.</i>                                                                                                             |         |
| <i>Vitena</i> , Drapetnaud, 1801.....                                                                                          | 544     |
| <i>V. ? obliqua</i> , M. & H., 1857, pl. xlii, figs. 10 <i>a, b</i> .....                                                      | 545     |
| <i>Hyalina</i> , Férussac, 1819.....                                                                                           | 545-547 |
| <i>H. ? occidentalis</i> , M. & H., 1857, pl. xlii, figs. 6 <i>a-d</i> .....                                                   | 547-548 |
| <i>H. ? evansi</i> , M. & H., 1860, figs. 68, 69, 70, p. 548.....                                                              | 548-549 |
| <i>Helicidae.</i>                                                                                                              |         |
| <i>Helix</i> , Linnæus, 1758.....                                                                                              | 549-551 |
| <i>Galarus</i> , Beck, 1837.....                                                                                               | 549     |
| <i>Camæna</i> , Albers, 1850.....                                                                                              | 550     |
| <i>Helix vetusta</i> , M. & H., 1860, pl. xlii, figs. 7 <i>a, b</i> .....                                                      | 552     |
| <i>Thaumastus</i> , Albers, 1860.....                                                                                          | 553     |
| <i>T. limaciformis</i> , M. & H., 1856, pl. xlv, figs. 8, <i>a-d</i> .....                                                     | 553-554 |
| <i>Columna</i> , Perry, 1811.....                                                                                              | 554     |
| <i>Rhoda</i> , H. & A. Adams, 1855.....                                                                                        | 555     |
| <i>Columna teres</i> , M. & H., 1856, pl. xlv, figs. 11 <i>a, b</i> .....                                                      | 555-556 |
| <i>C. vermicula</i> , M. & H., 1856, pl. xlv, figs. 12 <i>a, b</i> .....                                                       | 556-557 |
| <i>C. vermicula</i> var. <i>contraria</i> , Meek, 1866.....                                                                    | 557     |
| <i>Pectinibranchiata.</i>                                                                                                      |         |
| <i>Cerithiidae.</i>                                                                                                            |         |
| <i>Cerithidea</i> , Swainson, 1840.....                                                                                        | 558     |
| <i>Pirenella</i> , Gray, 1847.....                                                                                             | 558     |
| <i>Cerithidea</i> ( <i>Pirenella</i> ?) <i>nebrascensis</i> , M. & H., 1856, pl. lxiii, figs. 9 <i>a-c</i> ( <i>bis</i> )..... | 559     |
| <i>Ceriphasiidae.</i>                                                                                                          |         |
| <i>Goniobasis</i> , Lea, 1862.....                                                                                             | 560-561 |
| <i>G. convexa</i> , M. & H., 1856, pl. xlii, figs. 2 <i>a, b</i> , and figs. 71, p. 562 and 72, p. 563.....                    | 562-563 |
| <i>G. convexa</i> var. <i>impressa</i> , M. & H., 1857, pl. xlii, figs. 2 <i>c, d</i> .....                                    | 563-564 |
| <i>G. invenusta</i> , M. & H., 1857, pl. xlii, figs. 1 <i>a-e</i> .....                                                        | 564-565 |
| <i>G. nebrascensis</i> , M. & H., 1856, pl. lxiii, figs. 12 <i>a-h</i> , and fig. 73, p. 565.....                              | 565-566 |
| <i>G. tenuicarinata</i> , M. & H., 1857, pl. lxiii, figs. 14 <i>a-c</i> .....                                                  | 566-567 |
| <i>G. sublaevis</i> , M. & H., 1857, pl. xlii, figs. 5 <i>a, b</i> .....                                                       | 567     |
| <i>G. ? emitta</i> , M. & H., 1857, pl. xlii, figs. 4 <i>a-c</i> .....                                                         | 568     |
| <i>G. gracilenta</i> , Meek, pl. xlii, fig. 3 and fig. 74, p. 569.....                                                         | 568-569 |
| <i>G. ? subtoruosa</i> , M. & H., 1857, pl. xlii, figs. 17, <i>a-b</i> , and figs. 75, 76, p. 569.....                         | 569-570 |
| <i>Rissoiidae.</i>                                                                                                             |         |
| <i>Hadrobia</i> , Hartmann, 1821.....                                                                                          | 571     |
| <i>H. anthonyi</i> , M. & H., 1856, pl. lxiii, figs. 10 <i>a-d</i> .....                                                       | 571-572 |
| <i>H. warrenana</i> , M. & H., 1857, pl. lxiii, figs. 1 <i>a-c</i> .....                                                       | 572-573 |

|                                                                                                    | Page.   |
|----------------------------------------------------------------------------------------------------|---------|
| <i>H. subconica</i> , Meek, fig. 77, p. 573 .....                                                  | 573     |
| <i>H. ? calinoides</i> , Meek, fig. 78, p. 573 .....                                               | 573-574 |
| <i>Microparagus</i> , Meek, 1866 .....                                                             | 574-575 |
| <i>M. minutulus</i> , M. & H., 1856, pl. xliii, figs. 18 <i>a, b</i> .....                         | 575     |
| <i>Vicparidae</i> .                                                                                |         |
| <i>Vicparus</i> , Montfort, 1810 .....                                                             | 576-577 |
| <i>V. tenu</i> , M. & H., 1856, pl. xlv, figs. 6 <i>a-d</i> .....                                  | 577-578 |
| <i>V. retusus</i> , M. & H., 1856, pl. xlv, figs. 5 <i>a-f</i> .....                               | 578-579 |
| <i>V. conradi</i> , M. & H., 1856, pl. xlii, figs. 15 <i>a-d</i> .....                             | 579-580 |
| <i>V. pseud-retus</i> , M. & H., 1856, fig. 79 .....                                               | 580     |
| <i>V. trochiformis</i> , M. & H., 1856, pl. xlv, fig. 2 <i>a-e</i> .....                           | 580-582 |
| <i>V. leidyi</i> , M. & H., 1856, pl. xlv, fig. 4 .....                                            | 582-583 |
| <i>V. leidyi</i> var. <i>formosus</i> , pl. xlv, figs. 3 <i>a, b</i> .....                         | 583     |
| <i>V. raynoldsianus</i> , M. & H., 1861, pl. xlv, figs. 7 <i>a, b</i> .....                        | 584-585 |
| <i>Campelasma</i> , Ratnesque .....                                                                | 585-586 |
| <i>C. multilincata</i> , M. & H., 1856, pl. xlv, figs. 1 <i>a, b</i> .....                         | 586-587 |
| <i>C. catula</i> , M. & H., 1856, pl. xlv, figs. 14 <i>a, b</i> .....                              | 587-588 |
| <i>C. multistriata</i> , M. & H., 1856, pl. xliii, figs. 15 <i>a-e</i> , and fig. 80, p. 588 ..... | 588-589 |
| <i>Valvatidae</i> .                                                                                |         |
| <i>Valvata</i> , Müller, 1774 .....                                                                | 589-590 |
| <i>Tropidina</i> , H. & A. Adams, 1856 .....                                                       | 590     |
| <i>V. subumbilicata</i> , M. & H., 1856, pl. xliii, figs. 13 <i>a-c</i> .....                      | 590-591 |
| <i>V. parvula</i> , M. & H., 1856 .....                                                            | 591     |
| <i>V. ? montanaensis</i> , Meek, figs. 81, 82, 83, p. 591 .....                                    | 591-592 |

FOSSILS OF THE WIND RIVER TERTIARY.

*Mollusca*.

*Gastropoda*.

*Pulmonata*.

*Vitrinidae*.

|                                       |         |
|---------------------------------------|---------|
| <i>Macrocaelis</i> , Beck, 1857 ..... | 593-594 |
|---------------------------------------|---------|

|                                    |     |
|------------------------------------|-----|
| <i>Ampelita</i> , Beck, 1837 ..... | 594 |
|------------------------------------|-----|

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| <i>M. spatiosa</i> , M. & H., 1861, pl. xlii, figs. 9 <i>a-c</i> ..... | 594-595 |
|------------------------------------------------------------------------|---------|

*Helicidae*.

|                           |     |
|---------------------------|-----|
| <i>Helix</i> , Linn ..... | 596 |
|---------------------------|-----|

|                                                                                                      |         |
|------------------------------------------------------------------------------------------------------|---------|
| <i>H. ? veterana</i> , M. & H., 1861, pl. xlii, figs. 8 <i>a, b</i> , and figs. 84, 85, p. 596 ..... | 596-597 |
|------------------------------------------------------------------------------------------------------|---------|

FOSSILS OF THE WHITE RIVER TERTIARY.

*Mollusca*.

*Gastropoda*.

*Pulmonata*.

*Limnæidae*.

|                                |     |
|--------------------------------|-----|
| <i>Limnaea</i> , Lamarck ..... | 598 |
|--------------------------------|-----|

|                                                                 |         |
|-----------------------------------------------------------------|---------|
| <i>L. meekiana</i> , E. & S., pl. xlv, figs. 5 <i>a-c</i> ..... | 598-599 |
|-----------------------------------------------------------------|---------|

|                                                               |     |
|---------------------------------------------------------------|-----|
| <i>L. shumardi</i> , Meek, pl. xlv, figs. 6 <i>a, b</i> ..... | 599 |
|---------------------------------------------------------------|-----|

|                                 |     |
|---------------------------------|-----|
| <i>Planorbis</i> , Müller ..... | 599 |
|---------------------------------|-----|

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| <i>P. leidy</i> , M. & H., 1860, pl. xlv, figs. 3 <i>a-d</i> ..... | 599-600 |
|--------------------------------------------------------------------|---------|

|                                                |     |
|------------------------------------------------|-----|
| Subgenus <i>Menetus</i> , H. & A. Adams? ..... | 600 |
|------------------------------------------------|-----|

|                                                                                      |         |
|--------------------------------------------------------------------------------------|---------|
| <i>P. (Menetus) nebrascensis</i> , E. & S., 1854, pl. xlv, figs. 2 <i>a, b</i> ..... | 600-601 |
|--------------------------------------------------------------------------------------|---------|

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| <i>P. (Menetus) retustus</i> , M. & H., 1860, pl. xlv, figs. 1 <i>a-c</i> ..... | 601-602 |
|---------------------------------------------------------------------------------|---------|

*Physidae*.

|                                       |         |
|---------------------------------------|---------|
| <i>Physa</i> , Draparnaud, 1801 ..... | 603-604 |
|---------------------------------------|---------|

|                                        |     |
|----------------------------------------|-----|
| <i>Physella</i> , Haldeman, 1842 ..... | 603 |
|----------------------------------------|-----|

|                                        |     |
|----------------------------------------|-----|
| <i>Physodon</i> , Haldeman, 1842 ..... | 603 |
|----------------------------------------|-----|

|                                                                        |     |
|------------------------------------------------------------------------|-----|
| <i>Isidora</i> , Ehrenb., 1831 (= <i>Diastrophia</i> , Guilding) ..... | 604 |
|------------------------------------------------------------------------|-----|

|                                    |     |
|------------------------------------|-----|
| <i>Costella</i> , Dall, 1870 ..... | 604 |
|------------------------------------|-----|

|                                                                          |     |
|--------------------------------------------------------------------------|-----|
| <i>P. scaberrima</i> , E. & S., 1854, pl. xlv, figs. 4 <i>a, b</i> ..... | 604 |
|--------------------------------------------------------------------------|-----|

*Helicidae*.

|                           |     |
|---------------------------|-----|
| <i>Helix</i> , Linn ..... | 604 |
|---------------------------|-----|

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| <i>H. leidy</i> , H. & M., 1854, pl. xlv, figs. 7 <i>a, b</i> ..... | 604-605 |
|---------------------------------------------------------------------|---------|

APPENDIX.

|                                                                                    |     |
|------------------------------------------------------------------------------------|-----|
| <i>Tellina (Arcopagia) ? cheyennensis</i> , M. & H., 1856, pl. xvii, fig. 16 ..... | 607 |
|------------------------------------------------------------------------------------|-----|

|                                                                                      |         |
|--------------------------------------------------------------------------------------|---------|
| <i>Ammonites ? ? nullanensis</i> , M. & H., 1862, pl. viii, figs. 1 <i>a-c</i> ..... | 607-609 |
|--------------------------------------------------------------------------------------|---------|



MEEK, F. B. Paleontology. < Rep. Geol. Expl. 40th Parallel, vol. iv, part i, pp. 1-197, pls. i-xvii. Washington, 1877.

Silurian, Devonian, Carboniferous, Triassic, Jurassic, Cretaceous, Tertiary. Genera *Euto-noceras* (Hyatt), *Eudiscoceras* (Hyatt), *Polyrhytis*, *Rhytophorus*, *Pyrgulifera*.

## DESCRIPTIONS OF FOSSILS.

|                                                                                                                   | SILURIAN SPECIES. | Page.  |
|-------------------------------------------------------------------------------------------------------------------|-------------------|--------|
| <i>Mollusca.</i>                                                                                                  |                   |        |
| <i>Gasteropoda.</i>                                                                                               |                   |        |
| <i>Solariidae.</i>                                                                                                |                   |        |
| <i>O. Ophileta</i> , Vanuxem .....                                                                                |                   | 17     |
| <i>O. complanata</i> var. <i>nana</i> , Meek, 1870, pl. i, figs. 1, 1 <i>a</i> , 1 <i>b</i> .....                 |                   | 17-18  |
| <i>Raphistoma</i> , Hall .....                                                                                    |                   | 18     |
| <i>R. ? rotuliformis</i> , Meek, 1870, pl. i, figs. 2, 2 <i>a</i> , <i>b</i> .....                                |                   | 18-19  |
| <i>R. ? trochiscus</i> , Meek, 1870, pl. i, figs. 3, 3 <i>a</i> , <i>b</i> .....                                  |                   | 19     |
| <i>Articulata.</i>                                                                                                |                   |        |
| <i>Crustacea.</i>                                                                                                 |                   |        |
| <i>Paradoxidae.</i>                                                                                               |                   |        |
| <i>Canocoryphe</i> , Corda .....                                                                                  |                   | 20     |
| <i>C. (Ptychoparia) kingii</i> , Meek, 1870, pl. i, fig. 4 .....                                                  |                   | 20-23  |
| <i>Paradoxides</i> , Bronghiart .....                                                                             |                   | 23     |
| <i>P. ? nevadensis</i> , Meek, 1870, pl. i, fig. 5 .....                                                          |                   | 23-25  |
|                                                                                                                   | DEVONIAN SPECIES. |        |
| <i>Radiata.</i>                                                                                                   |                   |        |
| <i>Polypi.</i>                                                                                                    |                   |        |
| <i>Favositidae.</i>                                                                                               |                   |        |
| <i>Alveolites</i> , Lamarek .....                                                                                 |                   | 26     |
| <i>A. multilamella</i> , n. s., Meek, 1877, pl. ii, figs. 7, 7 <i>a</i> , <i>b</i> .....                          |                   | 25-26  |
| <i>Alveolites</i> , undt. sp., Meek, 1877 .....                                                                   |                   | 26-27  |
| <i>Favosites</i> , Lamarek .....                                                                                  |                   | 27     |
| <i>Favosites</i> , undt. sp., Meek, 1877, pl. i, fig. 6 .....                                                     |                   | 27     |
| <i>F. polymorpha</i> , Goldf. ? var. Meek, 1877, pl. ii, fig. 3 .....                                             |                   | 27-28  |
| <i>Spirigopora</i> , Goldfuss .....                                                                               |                   | 28     |
| <i>Spirigopora</i> , undt. sp., Meek, 1877 .....                                                                  |                   | 28     |
| <i>Cyathophyllidae.</i>                                                                                           |                   |        |
| <i>Ptychophyllum</i> , E. & H. ....                                                                               |                   | 28     |
| <i>P. ? infundibulum</i> , n. s., Meek, 1877, pl. ii, figs. 1, 1 <i>a</i> , <i>b</i> .....                        |                   | 28-29  |
| <i>Diphyphyllum</i> , Lonsdale .....                                                                              |                   | 29     |
| <i>D. fasciculum</i> , n. s., Meek, 1877, pl. ii, figs. 4, 4 <i>a</i> , <i>b</i> .....                            |                   | 29-31  |
| <i>Acervularia</i> , Schweigger .....                                                                             |                   | 31     |
| <i>A. pentagona</i> , Goldfuss, sp. 1826, pl. ii, figs. 5, 5 <i>a</i> .....                                       |                   | 31-32  |
| <i>Smithia</i> , E. & H. ....                                                                                     |                   | 32     |
| <i>S. hennahii</i> , Lonsdale, sp., 1840, pl. 2, figs. 6, 6 <i>a</i> .....                                        |                   | 32-33  |
| <i>Cyathophyllum</i> , Goldfuss .....                                                                             |                   | 33     |
| <i>C. patmeri</i> , n. s., Meek, 1877, pl. ii, fig. 2 .....                                                       |                   | 33-34  |
| <i>Mollusca.</i>                                                                                                  |                   |        |
| <i>Brachiopoda.</i>                                                                                               |                   |        |
| <i>Strophomenidae.</i>                                                                                            |                   |        |
| <i>Hemipronites</i> , Pander .....                                                                                |                   | 35     |
| <i>H. chemungensis</i> var. <i>arctostriata</i> , Conrad, sp., pl. iii, fig. 2 .....                              |                   | 35-36  |
| <i>Productidae.</i>                                                                                               |                   |        |
| <i>Productus</i> , Sowerby .....                                                                                  |                   | 36     |
| <i>P. subaculeatus</i> , Murchison ? 1840, pl. iii, figs. 7, 7 <i>a</i> , <i>b</i> .....                          |                   | 36-37  |
| <i>Rhynchonellidae.</i>                                                                                           |                   |        |
| <i>Atrypa</i> , Dalman .....                                                                                      |                   | 38     |
| <i>A. reticularis</i> , Linnæus, sp., 1767, pl. i, figs. 7 and 7 <i>a</i> , and pl. 3, figs. 6 ? 6 <i>a</i> ..... |                   | 38, 39 |
| <i>Spiriferidae.</i>                                                                                              |                   |        |
| <i>Spirifer</i> , Sowerby .....                                                                                   |                   | 39     |
| <i>S. utahensis</i> , Meek, 1860, pl. iii, figs. 1, 1 <i>a-e</i> .....                                            |                   | 39-41  |
| <i>S. engelmanni</i> , Meek, 1860, pl. iii, figs. 3 <i>a-c</i> (and 3 <i>d-f</i> ?) .....                         |                   | 41-42  |
| <i>S. (Trigonotreta) argentarius</i> , n. s., Meek, 1877, pl. iii, figs. 4 and 4 <i>a</i> , <i>b</i> .....        |                   | 42-43  |
| <i>S. (Trigonotreta) strigosus</i> , Meek, 1860, pl. iii, figs. 5, 5 <i>a</i> , <i>b</i> .....                    |                   | 43-45  |
| <i>S. (Trigonotreta) piñonensis</i> , Meek, 1870, pl. i, figs. 9, 9 <i>a</i> , <i>b</i> .....                     |                   | 45-46  |
| <i>Lamellibranchiata.</i>                                                                                         |                   |        |

| Anatinidæ.                                                                                     | Page. |
|------------------------------------------------------------------------------------------------|-------|
| <i>Lamella</i> de Kobinck .....                                                                | 46    |
| <i>E. ? pinnatus</i> , n. s., Meek, 1877, pl. i, figs. 8, 8 a .....                            | 46-47 |
| Cephalopoda.                                                                                   |       |
| Orthoceratidæ.                                                                                 |       |
| <i>Orthoceras</i> , Auct. ....                                                                 | 47-48 |
| <i>O. kingi</i> , n. s., Meek, 1877, pl. ii, fig. 8 .....                                      | 48    |
| <i>Orthoceras</i> , undt. sp., Meek, 1877, pl. ii, fig. 9 .....                                | 48    |
| Articulata.                                                                                    |       |
| Crustacea.                                                                                     |       |
| Phacopsidæ.                                                                                    |       |
| <i>Dalmanites</i> , Auct. ....                                                                 | 48    |
| <i>Dalmanites</i> , sp. undt., Meek, 1877, pl. i, figs. 11, 11 a .....                         | 48-49 |
| Proetidæ.                                                                                      |       |
| <i>Proetus</i> , Steininger .....                                                              | 49    |
| <i>P. (Phæton) denticulatus</i> , n. s., Meek, 1877, pl. i, figs. 10, 10 a and b .....         | 49-50 |
| CARBONIFEROUS SPECIES.                                                                         |       |
| Radiata.                                                                                       |       |
| Polypi.                                                                                        |       |
| Favositidæ.                                                                                    |       |
| <i>Syringopora</i> , Goldfuss. ....                                                            | 50    |
| <i>Syringopora</i> , undt. sp., Meek, 1877, pl. vi, figs. 2, 2 a .....                         | 50-51 |
| Cyathophyllidæ.                                                                                |       |
| <i>Zaphrentis</i> , Latinesque & Clifford .....                                                | 52    |
| <i>Z. eccentrica</i> , n. s., Meek, 1877, pl. iv, figs. 1, 1 a-d .....                         | 52-53 |
| <i>Z. ? multilamella</i> , Hall? 1852, pl. vi, figs. 4, 4 a and b .....                        | 53-54 |
| <i>Z. ? stansberryi</i> , Hall, 1852, pl. vi, figs. 3, 3 a-c .....                             | 54-56 |
| <i>Campophyllum</i> , E. & H. ....                                                             | 57    |
| <i>Campophyllum</i> , undt. sp., Meek, 1877, pl. v, figs. 2, 2 a and b .....                   | 57-58 |
| <i>Lithostrotia</i> , Fleming .....                                                            | 58    |
| <i>L. whitneyi</i> , Meek, n. s., 1875, pl. vi, figs. 1, 1 a-c .....                           | 58-59 |
| <i>Cyathophyllum</i> , Goldfuss. ....                                                          | 60    |
| <i>C. (Campophyllum) ? nevadense</i> , n. s., Meek, 1877, pl. v, figs. 3, 3 a and b .....      | 60    |
| <i>C. subcespitosum</i> , n. s., Meek, 1877, pl. v, figs. 4, 4 a and b .....                   | 60-61 |
| Mollusca.                                                                                      |       |
| Brachiopoda.                                                                                   |       |
| Strophomenidæ.                                                                                 |       |
| <i>Hemipronites</i> , Pander .....                                                             | 62    |
| <i>H. crenistria</i> , Phillips, sp., 1836, pl. vii, fig. 2 .....                              | 62    |
| <i>Orthis</i> , Dalman .....                                                                   | 63    |
| <i>O. michelini</i> , L'Éveillé, var. Meek, 1877, pl. vii, figs. 1, 1 a-c .....                | 63-64 |
| Productidæ.                                                                                    |       |
| <i>Productus</i> , Sowerby .....                                                               | 64    |
| <i>P. nevadensis</i> , n. s., Meek, 1877, pl. viii, figs. 2, 2 a-c .....                       | 64-67 |
| <i>Productus</i> , undt. sp., Meek, 1877, pl. vii, figs. 6, 6 a and b .....                    | 67-68 |
| <i>P. semireticulatus</i> , Martin, 1709, pl. vii, fig. 5 .....                                | 69    |
| <i>P. costatus</i> , Sowerby? var. Meek, 1877, pl. vii, figs. 4, 4 a and b .....               | 69-72 |
| <i>P. prattenianus</i> , Norwood, 1834, pl. vii, fig. 7 .....                                  | 72-73 |
| <i>P. semistriatus</i> , Meek, 1860, pl. vii, figs. 8, 8 a .....                               | 74-75 |
| <i>P. subhorridus</i> , n. s., Meek, 1877, pl. vii, figs. 3, 3 a and b .....                   | 75-76 |
| <i>P. multistriatus</i> , Meek, 1860, pl. viii, figs. 3, 3 a-e .....                           | 76-78 |
| <i>P. longispinus</i> , Sowerby, 1814, pl. viii, figs. 4, 4 a .....                            | 78-79 |
| Rhynchonellidæ.                                                                                |       |
| <i>Leorhynchus</i> , Hall .....                                                                | 79    |
| <i>L. quadricostatus</i> , Vanuxem? sp., 1842, pl. iii, figs. 9, 9 a and b .....               | 79-80 |
| Spiriferidæ.                                                                                   |       |
| <i>Athyris</i> , McCoy .....                                                                   | 81    |
| <i>A. ? persinuata</i> , n. s., Meek, 1877, pl. ix, figs. 4, 4 a and b .....                   | 81-82 |
| <i>A. roissyi</i> , l'Éveillé, sp., 1835, pl. ix, figs. 3, 3 a and b .....                     | 82-83 |
| <i>A. subtilita</i> , Hall, 1852, pl. viii, figs. 6, 6 a .....                                 | 83-84 |
| <i>Spiriferina</i> d'Orbigny .....                                                             | 84    |
| <i>Spiriferina</i> , undt. sp., Meek, 1877, pl. viii, figs. 5, 5 a, b .....                    | 84-85 |
| <i>S. pulchra</i> , Meek, 1860, pl. viii, figs. 1, 1 a-e, and pl. xii, figs. 12, 12 a-d? ..... | 85-87 |
| <i>Spirifer</i> , Sowerby .....                                                                | 87    |
| <i>S. cuspidatus</i> , Martin? sp., 1796, pl. iii, figs. 11, 11 a .....                        | 87-88 |
| <i>Spirifer (Trigonotreta) opimus</i> , Hall? 1858, pl. ix, fig. 6 .....                       | 88-90 |
| <i>S. (Trigonotreta) scobina</i> , Meek, 1860, pl. ix, figs. 1, 1 a-d .....                    | 90-91 |
| <i>S. (Trigonotreta) caneratus</i> , Morton, 1836, pl. ix, figs. 2, 2 a .....                  | 91-92 |

|                                                                                              | Page.   |
|----------------------------------------------------------------------------------------------|---------|
| <i>Lamellibranchiata.</i>                                                                    |         |
| <i>Pteriidae.</i>                                                                            |         |
| ? <i>Posidonomya</i> , Bronn.....                                                            | 92      |
| <i>P. ? fragosa</i> , n. s., Meek, 1877, pl. iii, figs. 8, 8 a.....                          | 92-93   |
| <i>Ariculopecten</i> , McCoy.....                                                            | 93      |
| <i>A. catactus</i> , n. s., Meek, 1877, pl. iii, figs. 10, 10 a, and 10 b?.....              | 93-95   |
| <i>A. utahensis</i> , Meek, 1860, pl. ix, figs. 7, 7 a and b (and 7 c, and d?).....          | 95-96   |
| <i>A. occidaneus</i> , n. s., Meek, 1877, pl. xii, figs. 13, 13 a and b.....                 | 96-97   |
| <i>Cephalopoda.</i>                                                                          |         |
| <i>Goniatitidae.</i>                                                                         |         |
| <i>Goniatites</i> , De Haan.....                                                             | 98      |
| <i>G. goniolobus</i> , n. s., Meek, 1877, pl. ix, figs. 5, 5 a, b.....                       | 98-99   |
| UPPER TRIASSIC SPECIES.                                                                      |         |
| <i>Mollusca.</i>                                                                             |         |
| <i>Brachiopoda.</i>                                                                          |         |
| <i>Discinidae.</i>                                                                           |         |
| <i>Discina</i> , Lamarck.....                                                                | 99      |
| <i>Discina</i> , sp. undt., Meek, 1877, pl. x, figs. 3, 3 a.....                             | 99-100  |
| <i>Lamellibranchiata.</i>                                                                    |         |
| <i>Pteriidae.</i>                                                                            |         |
| <i>Halobia</i> , Bronn.....                                                                  | 100     |
| <i>H. (Daonella) lommeli</i> , Wissmann, 1841, pl. x, fig. 5.....                            | 100-102 |
| <i>Lucinidae.</i>                                                                            |         |
| <i>Sphæra</i> , Sowerby.....                                                                 | 102     |
| <i>S. whitneyi</i> , n. s., Meek, 1877, pl. x, figs. 4, 4 a-c.....                           | 102     |
| <i>Mytilidae.</i>                                                                            |         |
| ? <i>Modiomorpha</i> , H. & W.....                                                           |         |
| <i>M. ? ovata</i> , n. s., Meek, 1877, pl. x, figs. 1, 1 a.....                              | 103     |
| <i>M. ? lata</i> , n. s., Meek, 1877, pl. x, fig. 2.....                                     | 103-104 |
| <i>Cephalopoda.</i>                                                                          |         |
| <i>Orthoceratitidae.</i>                                                                     |         |
| <i>Orthoceras</i> , Auct.....                                                                | 104     |
| <i>O. blakei</i> , Gabb? 1864, pl. x, fig. 11.....                                           | 104-105 |
| AMMONITOID FORMS OF THE UPPER TRIAS OF NEVADA.                                               |         |
| <i>Clydonitidae</i> , n. f., Hyatt, 1877.....                                                | 107     |
| * <i>Coroceras</i> , n. g., Hyatt, 1877.....                                                 | 107-108 |
| <i>Clydonites</i> , Hauer.....                                                               | 109     |
| <i>C. levidorsatus</i> , Hauer, sp., 1860, pl. x, fig. 7.....                                | 109-110 |
| <i>Trachyceratidae.</i>                                                                      |         |
| ? <i>Gunnoceras</i> , n. g., Hyatt, 1877.....                                                | 110-111 |
| <i>G. rotelliforme</i> , n. s., Meek, 1877, pl. x, figs. 9, and 9 a.....                     | 111-113 |
| <i>G. blakei</i> , Gabb, sp., 1864, pl. x, figs. 10, 10 a-c, and pl. xi, figs. 6, 6 a.....   | 113-116 |
| <i>Trachyceras</i> , Laube.....                                                              | 116     |
| <i>T. blakei</i> , Gabb, sp., 1864, pl. xi, figs. 3, 3 a.....                                | 116-118 |
| <i>T. judicarium</i> , Mojsisovics, 1869, pl. xi, figs. 1, 1 a.....                          | 118     |
| <i>T. judicarium</i> , var. <i>subaspermum</i> , Meek, 1877, pl. xi, figs. 2, 2 a and b..... | 118-119 |
| <i>Arcestidae.</i>                                                                           |         |
| <i>Arcestes</i> , Suess.....                                                                 | 119-120 |
| <i>A. ? perplanus</i> , n. s., Meek, 1877, pl. xi, figs. 7 and 7 a.....                      | 120-121 |
| <i>A. gabbi</i> , n. s., Meek, 1877, pl. x, figs. 6, 6 a and b.....                          | 121-123 |
| <i>Physanoidae.</i>                                                                          |         |
| ? <i>Aerochordiceras</i> , n. g., Hyatt, 1877.....                                           | 124     |
| <i>A. hyatti</i> , n. s., Meek, 1877, pl. xi, figs. 5 and 5 a.....                           | 124-126 |
| <i>Eudoceras</i> , n. g., Hyatt, 1877.....                                                   | 126     |
| <i>E. laubei</i> , n. s., Meek, 1877, pl. 10, figs. 8, 8 a.....                              | 126-128 |
| <i>Eudiscoceras</i> , n. g., Hyatt, 1877.....                                                | 128     |
| <i>E. gabbi</i> , n. s., Meek, 1877, pl. xi, figs. 3 and 3 a.....                            | 128-129 |
| JURASSIC SPECIES.                                                                            |         |
| <i>Mollusca.</i>                                                                             |         |
| <i>Lamellibranchiata.</i>                                                                    |         |
| <i>Limidae.</i>                                                                              |         |
| <i>Lima</i> , Bruguière.....                                                                 | 130     |
| <i>L. (Limatula) erecta</i> , n. s., Meek, 1877, pl. xii, fig. 2.....                        | 130     |

\* κόρυς, a helmet; κέρας, a horn.

† ἀκροχορδών, a wart; κέρας, a horn.

‡ γυμρός, naked; ὠτός, back; κέρας, a horn.

|                                                                                                                       | Page.   |
|-----------------------------------------------------------------------------------------------------------------------|---------|
| <i>Pinnidae.</i>                                                                                                      |         |
| <i>Pinna</i> , Linnaeus .....                                                                                         | 131     |
| <i>P. kingii</i> , n. s., Meek, 1877, pl. xii, figs. 9, 9 <i>a</i> .....                                              | 131-132 |
| <i>Mytilidae.</i>                                                                                                     |         |
| <i>Yolsella</i> , Scopoli .....                                                                                       | 132     |
| <i>V. scalprum</i> , var. <i>isonema</i> , Meek, 1877, pl. xii, figs. 4, 4 <i>a</i> .....                             | 132-133 |
| <i>Trigoniidae.</i>                                                                                                   |         |
| <i>Myophoria</i> , Bronn .....                                                                                        | 133     |
| <i>M. lineata</i> , Münster? 1834, pl. xii, figs. 3, 3 <i>a</i> .....                                                 | 133-134 |
| <i>Arcidae.</i>                                                                                                       |         |
| <i>Cucullaea</i> , Lamarck .....                                                                                      | 134     |
| <i>C. haguei</i> , n. s., Meek, 1877, pl. xii, figs. 1, 1 <i>a</i> , <i>b</i> .....                                   | 134-135 |
| <i>Anatinidae.</i>                                                                                                    |         |
| <i>Myacites</i> , Auct. ....                                                                                          | 136     |
| <i>M. (Pleuromya) subcompressa</i> , Meek, 1873, pl. xii, figs. 6, 6 <i>a</i> .....                                   | 136-137 |
| <i>M. inconspicuus</i> , n. s., Meek, 1877, pl. xii, fig. 10 .....                                                    | 137     |
| <i>M. (Pleuromya) weberensis</i> , n. s., Meek, 1877, pl. xii, figs. 11, 11 <i>a</i> .....                            | 137-138 |
| <i>Cephalopoda.</i>                                                                                                   |         |
| <i>Belemnitidae.</i>                                                                                                  |         |
| <i>Belemnites</i> , Auct. ....                                                                                        | 138     |
| <i>B. nevadensis</i> , n. s., Meek, 1877, pl. xii, figs. 7, 7 <i>a</i> , <i>b</i> (and 8 <i>a</i> , <i>b</i> ?) ..... | 138-139 |
| CRETACEOUS FOSSILS.                                                                                                   |         |
| <i>Mollusca.</i>                                                                                                      |         |
| <i>Ostreidae.</i>                                                                                                     |         |
| <i>Ostrea</i> , Linn .....                                                                                            | 140     |
| <i>Ostrea</i> , undt. sp., Meek, 1877, pl. xv, figs. 10, 10 <i>a-c</i> .....                                          | 140-141 |
| <i>Anomiidae.</i>                                                                                                     |         |
| <i>Anomia retiformis</i> , n. s., Meek, 1877, fig. i, p. 141 .....                                                    | 141     |
| <i>Pteriidae.</i>                                                                                                     |         |
| <i>Inoceramus</i> , Sowerby .....                                                                                     | 142     |
| <i>I. simpsoni</i> , Meek, 1860, pl. xiii, fig. 3 .....                                                               | 142-143 |
| <i>I. problematicus</i> , Schlot? 1820, pl. xiii, figs. 2 and 2 <i>a</i> .....                                        | 143-144 |
| <i>Inoceramus</i> , sp. undt., Meek, 1877, pl. xiii, figs. 4, 4 <i>a</i> .....                                        | 144     |
| <i>I. erectus</i> , n. s., Meek, 1877, pl. xiii, figs. 1, 1 <i>a</i> , and pl. xiv, fig. 3 .....                      | 145     |
| <i>I. deformis</i> , Meek, 1872, pl. xiv, figs. 4, 4 <i>a</i> .....                                                   | 146-148 |
| <i>Arcidae.</i>                                                                                                       |         |
| <i>Cucullaea</i> , Lamarck .....                                                                                      | 148     |
| <i>C. (Trigonarca) ? obliqua</i> , n. s., Meek, 1877, pl. xiv, figs. 1, 1 <i>a-b</i> .....                            | 148-149 |
| <i>Axiacea</i> , Poli .....                                                                                           | 149     |
| <i>A. wyomingensis</i> , n. s., Meek, 1877, figs. 2 and 3, p. 150 .....                                               | 149-150 |
| <i>Corbulidae.</i>                                                                                                    |         |
| <i>Corbula</i> , Bruguière .....                                                                                      | 150     |
| <i>Corbula</i> , undt. sp., Meek, 1877, pl. xiv, fig. 2 .....                                                         | 150-151 |
| <i>Cardiidae.</i>                                                                                                     |         |
| <i>Cardium</i> , Linnaeus .....                                                                                       | 151     |
| <i>C. curtum</i> , M. & H.? 1861, pl. xv, fig. 3 (not 3 <i>a</i> ) .....                                              | 151-152 |
| <i>C. subcurtum</i> , Meek, 1873, pl. xv, fig. 3 <i>a</i> (not 3) .....                                               | 152-153 |
| <i>Macluridae.</i>                                                                                                    |         |
| <i>Maclura</i> , Linnaeus .....                                                                                       | 153     |
| <i>M. ? emmonsii</i> , n. s., Meek, 1877, pl. xv, fig. 8 .....                                                        | 153-154 |
| <i>M. (Trigonella) ? arenaria</i> , n. s., Meek, 1877, pl. xiv, fig. 5 .....                                          | 154-155 |
| <i>M. (Cymbophora) ? utahensis</i> , n. s., Meek, 1877, pl. xv, figs. 9, 9 <i>a</i> , <i>b</i> .....                  | 155-156 |
| <i>Tellinidae.</i>                                                                                                    |         |
| <i>Tellina</i> , Linnaeus .....                                                                                       | 156     |
| <i>T. ? isonema</i> , n. s., Meek, 1877, pl. xv, fig. 6 .....                                                         | 156-157 |
| <i>T. modesta</i> , n. s., Meek, 1877, pl. xv, figs. 4-5 .....                                                        | 157-158 |
| <i>Veneridae.</i>                                                                                                     |         |
| <i>Cyprineria</i> , Conrad .....                                                                                      | 158     |
| <i>C. ? subalata</i> , Meek, 1873, pl. xv, fig. 7 .....                                                               | 158-159 |
| <i>Gasteropoda.</i>                                                                                                   |         |
| <i>Naticidae.</i>                                                                                                     |         |
| <i>Gyrodes</i> , Conrad .....                                                                                         | 159     |
| <i>G. depressa</i> , n. s., Meek, 1877, pl. xv, figs. 1, 1 <i>a</i> .....                                             | 159-160 |
| <i>Aporrhaidae.</i>                                                                                                   |         |
| <i>Anchura</i> , Conrad .....                                                                                         | 160     |
| <i>A. ? fusiformis</i> , n. s., Meek, 1877, pl. xv, figs. 2, 2 <i>a</i> .....                                         | 160-161 |



|                                                                                                         | Page.   |
|---------------------------------------------------------------------------------------------------------|---------|
| <i>Siphonariidae.</i>                                                                                   |         |
| <i>Anisomyon</i> , M. & H. ....                                                                         | 162     |
| <i>A. sexsulcatus</i> , M. & H.? 1856, figs. 4 and 5, p. 162 .....                                      | 162     |
| FOSSILS OF THE BEAR RIVER FRESH OR BRACKISH WATER BEDS.                                                 |         |
| <i>Mollusca.</i>                                                                                        |         |
| <i>Lamellibranchiata.</i>                                                                               |         |
| <i>Unionidae.</i>                                                                                       |         |
| <i>Unio</i> , Retzius .....                                                                             | 164     |
| <i>U. vetustus</i> , Meek, 1860, pl. xvi, figs. 5, 5 <i>a-c</i> .....                                   | 164-165 |
| <i>U. belliplicatus</i> , Meek, 1870, pl. xvi, figs. 4, 4 <i>a</i> .....                                | 165-167 |
| <i>Cyrenidae.</i>                                                                                       |         |
| <i>Corbicula</i> , Benson .....                                                                         | 167     |
| <i>C. (Veloritina) durkeei</i> , Meek, 1870, pl. xvi, figs. 6 <i>a-g</i> .....                          | 167-170 |
| <i>Corbulidae.</i>                                                                                      |         |
| <i>Corbula</i> , Brug .....                                                                             | 170     |
| <i>C. (Anisorhynchus) pyriformis</i> , Meek, 1860, pl. xvii, figs. 2, 2 <i>a-d</i> .....                | 170-174 |
| <i>C. (Anisorhynchus?) engelmanni</i> , Meek, 1860, pl. xvii, figs. 1, 1 <i>a</i> .....                 | 174-175 |
| <i>Gasteropoda.</i>                                                                                     |         |
| <i>Auriculidae.</i>                                                                                     |         |
| <i>Rhytiphorus</i> , Meek, 1873 .....                                                                   | 175     |
| <i>R. priscus</i> , Meek, 1860, pl. xvii, figs. 6 and 6 <i>a</i> .....                                  | 175-176 |
| <i>Ceriphasiidae.</i>                                                                                   |         |
| <i>Pyrgulifera humerosa</i> , Meek, 1860, pl. xvii, figs. 19, 19 <i>a</i> , and fig. 6, p. 177 .....    | 176-178 |
| <i>Viviparidae.</i>                                                                                     |         |
| <i>Viviparus</i> , Montfort .....                                                                       | 178     |
| <i>V. conradi</i> , M. & H., 1856, pl. xvii, figs. 18, 18 <i>a</i> .....                                | 178-179 |
| <i>Campeloma</i> , Rafinesque .....                                                                     | 179     |
| <i>C. macrospira</i> , Meek ? 1872, pl. xvii, figs. 17 <i>a, b</i> .....                                | 179-181 |
| <i>Campeloma</i> (undt. sp.), Meek, 1877, pl. xvii, figs. 15 <i>a, b</i> , and fig. 16 <i>a-c</i> ..... | 181     |
| <i>Limnæidae.</i>                                                                                       |         |
| <i>Limnaea</i> , Lamarck .....                                                                          | 181     |
| <i>L. (Limnophysa) nitidula</i> , Meek, 1860, pl. xvii, figs. 5, 5 <i>a</i> .....                       | 181-182 |
| SPECIES OF UNDOUBTED TERTIARY AGE.                                                                      |         |
| <i>Mollusca.</i>                                                                                        |         |
| <i>Lamellibranchiata.</i>                                                                               |         |
| <i>Cyrenidae.</i>                                                                                       |         |
| <i>Sphaerium</i> , Scopoli.                                                                             |         |
| <i>S. rugosum</i> , Meek, 1870, pl. xvi, figs. 2, 2 <i>a, b</i> .....                                   | 182-183 |
| <i>S. ? idahoense</i> , Meek, 1870, pl. xvi, fig. 1, 1 <i>a</i> .....                                   | 183-184 |
| <i>Unionidae.</i>                                                                                       |         |
| <i>Unio</i> , Retzius .....                                                                             | 184     |
| <i>U. haydeni</i> , Meek, 1860, pl. xvi, figs. 3, 3 <i>a, b</i> .....                                   | 184-185 |
| <i>Gasteropoda.</i>                                                                                     |         |
| <i>Limnæidae.</i>                                                                                       |         |
| <i>Ancylus</i> , Geoffroy .....                                                                         | 186     |
| <i>A. undulatus</i> , Meek, 1870, pl. xvii, figs. 12 <i>a, b</i> .....                                  | 186     |
| <i>Carinifex</i> , Binney .....                                                                         | 187     |
| Subgenus <i>Vorticifex</i> , Meek, 1870 .....                                                           | 187     |
| <i>C. (Vorticifex) binneyi</i> , Meek, 1870, pl. xvii, figs. 11, 11 <i>a</i> .....                      | 187-188 |
| <i>C. (Vorticifex) tryoni</i> , Meek, 1870, pl. xvii, figs. 10, 10 <i>a-c</i> .....                     | 188-189 |
| <i>Planorbis</i> , Guettard .....                                                                       | 189     |
| <i>P. spectabilis</i> , Meek, 1860, pl. xvii, figs. 13, 13 <i>a-f</i> .....                             | 189     |
| <i>P. spectabilis</i> var. <i>utahensis</i> , Meek, 1860, pl. xvii, figs. 14, 14 <i>a-c</i> .....       | 190-191 |
| <i>Limnaea</i> , Lamarck .....                                                                          | 191     |
| <i>L. (Limnophysa) vetusta</i> , Meek, 1860, pl. xvii, figs. 4, 4 <i>a, b</i> .....                     | 191     |
| <i>L. similis</i> , Meek, 1860, pl. xvii, figs. 3, 3 <i>a</i> .....                                     | 191-192 |
| <i>L. (Polyrrhytis) kingii</i> , n. s., Meek, 1877, figs. 6 and 7, p. 192 .....                         | 192-193 |
| <i>Ceriphasiidae.</i>                                                                                   |         |
| <i>Goniobasis</i> , Lea .....                                                                           | 193     |
| <i>G. simpsoni</i> , Meek, 1860, pl. xvii, figs. 7, 7 <i>a-d</i> .....                                  | 193-195 |
| <i>Melaniidae.</i>                                                                                      |         |
| <i>Melania</i> , Anet .....                                                                             | 195     |
| <i>M. ? sculptilis</i> , Meek, 1870, pl. xvii, fig. 8 .....                                             | 195-196 |
| <i>M. ? subsculptilis</i> , Meek, 1870, pl. xvii, fig. 9 .....                                          | 196-197 |

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## PART II.

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THE PUBLISHED WRITINGS OF CHARLES ABIATHAR WHITE, 1860-1884.

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## II.—THE PUBLISHED WRITINGS OF CHARLES ABIATHAR WHITE, A. M., M. D.

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This catalogue is intended to embrace the titles and place of publication, not only of all the scientific writings of Dr. White, but his reviews of the writings of other authors, and his more popular articles also. In only a few instances however, are newspaper articles, of which he has written many, noticed on the following pages; but the intention has been to make entry of all his short published notes which contain any expression of his views upon scientific subjects, as well as of his more elaborate works. The annotations which accompany this catalogue are made up mainly from data furnished by the author of the works, and all expressions of opinion upon geologic and paleontologic subjects contained in them should be regarded as his own.

Charles A. White was born in North Dighton, Bristol County, Massachusetts, on January 26, 1826. He has held the following official positions in education and science, to which subjects most of his writings pertain: State Geologist of Iowa, by legislative appointment, from 1866 to 1869, inclusive; Professor of Natural History in the Iowa State University, from 1867 to 1873; Professor of Natural History in Bowdoin College, from 1873 to 1875; Paleontologist to the U. S. Geographical and Geological Surveys West of the 100th Meridian, in charge of Lieut. George M. Wheeler, in 1874; Geologist and Paleontologist to the U. S. Geological Survey of the Territories, in charge of Maj. J. W. Powell, in 1875; Geologist and Paleontologist to the U. S. Geological Survey of the Territories, in charge of Dr. F. V. Hayden, from 1876 to 1879; in charge of paleontological collections in the U. S. National Museum from 1879 to 1882; detailed in 1881 to act as chief of the Artesian Wells Commission upon the Great Plains, under the auspices of the U. S. Agricultural Department; Geologist to the U. S. Geological Survey in 1882; Paleontologist to the U. S. Geological Survey in 1883, which position he now holds, together with honorary curatorship in the U. S. National Museum; President of the Biological Society of Washington for the years 1883 and 1884.

A partial bibliography of Dr. White appeared in the "American Field" for March and April, 1885; this is by Charles Aldrich.



## 1.

WHITE, C. A. Observations upon the Geology and Paleontology of Burlington, Iowa, and its Vicinity. <Bost. Jour. Nat. Hist., (Bost. Soc. Nat. Hist.) vol. vii, pp. 209-235. Boston, 1861.

Same. Boston, 1860, 8vo., p. 209-235. Fifty separates printed without title-page, covers, or repaging.

The 50 separates appeared at the date mentioned, but Part II of vol. vii, according to a note inserted in it, did not appear until December, 1862, although it bears the imprint 1861.

This paper is divided into two parts; in the first, details of local geology are given, and attention is called to the fact that in this locality the change from Devonian to Carboniferous took place so gradually as to render it impossible to point out the exact line where one ends and the other begins. A section of the rocks at Burlington is given with a table showing the vertical range of shells, and a list of the genera discovered in the rocks at Burlington, showing the different beds in which they have been recognized.

The second part contains descriptions of seven new species of *Brachiopoda* from the Chemung rocks at Burlington, Iowa.

|                                                               | Page.   |
|---------------------------------------------------------------|---------|
| <i>Rhynchonella pustulosa</i> , n. s., White, 1860 .....      | 226     |
| <i>Nucleospira barrisii</i> , n. s., White, 1860 .....        | 227-228 |
| <i>Terebratula burlingtonensis</i> , n. s., White, 1860 ..... | 228-229 |
| <i>Athyris crassicaudalis</i> , n. s., White, 1860 .....      | 229-230 |
| <i>Productus laevicostus</i> , n. s. White, 1860 .....        | 230-231 |
| <i>Orthis thieniei</i> , n. s., White, 1860 .....             | 231-232 |
| <i>Spirifer solidirostris</i> , n. s., White, 1860 .....      | 232-233 |

This part also contains a list of described fossils recognized in the Burlington beds. 233-235

## 2.

WHITE, C. A., and WHITFIELD, R. P. Observations upon the Rocks of the Mississippi Valley which have been referred to the Chemung Group of New York, together with Descriptions of New Species of Fossils from the same horizon at Burlington, Iowa. <Proc. Bost. Soc. Nat. Hist., vol. viii, pp. 289-306. Boston, 1862.

Same. Boston, 1862, 8vo., pp. 289-306. Fifty separates printed without title-page, covers, or repaging.

Thirty-one species of Lower Carboniferous fossils are described in this paper.

## Description of new species.

|                                                                        | Page.   |
|------------------------------------------------------------------------|---------|
| <i>Brachiopoda</i> .                                                   |         |
| <i>Orthis</i> , Dalman .....                                           | 292     |
| <i>O. subelliptica</i> , n. s., White & Whitfield, 1862.....           | 292-293 |
| <i>Streptorhynchus</i> , King .....                                    | 293     |
| <i>S. inflatus</i> , n. s., White & Whitfield, 1862 .....              | 293     |
| <i>Spirifer</i> , Sowerby.....                                         | 293     |
| <i>S. hirtus</i> , n. s., White & Whitfield, 1862.....                 | 293-294 |
| <i>Retzia</i> , King .....                                             | 294     |
| <i>R. sexplicata</i> , n. s., White & Whitfield, 1862 .....            | 294     |
| <i>Rhynchonella</i> , Fischer .....                                    | 294     |
| <i>R. opposita</i> , n. s., White & Whitfield, 1862 .....              | 294-295 |
| <i>Pentamerus</i> , Sowerby.....                                       | 295     |
| <i>P. lenticularis</i> , n. s., White & Whitfield, 1862 .....          | 295     |
| <i>Conchifera</i> .                                                    |         |
| <i>Arundo-pecten</i> , McCoy .....                                     | 295     |
| <i>A. limaformis</i> , n. s., White & Whitfield, 1862 .....            | 295-296 |
| <i>A. nodocostatus</i> , n. s., White & Whitfield, 1862.....           | 296     |
| <i>Mytilus</i> , Linn .....                                            | 296     |
| <i>M. febristriatus</i> , n. s., White & Whitfield, 1862 .....         | 296-297 |
| <i>M. occidentalis</i> , n. s., White & Whitfield, 1862 .....          | 297     |
| Subgenus <i>Orthonota</i> , Conrad .....                               | 297     |
| <i>M. (Orthonota) ventricosa</i> , n. s., White & Whitfield, 1862..... | 297-298 |
| <i>Nucula</i> , Lamarek.....                                           | 298     |
| <i>N. iowensis</i> , n. s., White & Whitfield, 1862 .....              | 298     |
| <i>Leda</i> , Schum.....                                               | 298     |
| <i>L. barrisii</i> , n. s., White & Whitfield, 1862 .....              | 298     |

|                                                                          | Page.   |
|--------------------------------------------------------------------------|---------|
| <i>Macrodon</i> , Lycett .....                                           | 298     |
| <i>M. parvus</i> , n. s., White & Whitfield, 1862 .....                  | 299     |
| <i>Conocardium</i> , Bronn .....                                         | 299     |
| <i>C. pulcellum</i> , n. s., White & Whitfield, 1862 .....               | 299     |
| <i>Cypricardia?</i> <i>rigida</i> , n. s., White & Whitfield, 1862 ..... | 300     |
| <i>Cypricardella</i> , Hall .....                                        | 300     |
| <i>C. quadrata</i> , n. s., White & Whitfield, 1862 .....                | 300-301 |
| <i>Edmondia</i> , Koninck .....                                          | 301     |
| <i>E. burlingtonensis</i> , n. s., White & Whitfield, 1862 .....         | 301     |
| <i>Gasteropoda</i> .                                                     |         |
| <i>Euomphalus</i> , Sowerby .....                                        | 301     |
| <i>E. ammon</i> , n. s., White & Whitfield, 1862 .....                   | 301     |
| <i>Platyceras</i> , Conrad .....                                         | 302     |
| <i>P. paralum</i> , n. s., White & Whitfield, 1862 .....                 | 302     |
| <i>P. bivalve</i> , n. s., White & Whitfield, 1862 .....                 | 302     |
| <i>Pleurotomaria</i> , DeFrance .....                                    | 302     |
| <i>P. mississippiensis</i> , n. s., White & Whitfield, 1862 .....        | 302     |
| <i>Murchisonia</i> , D'Archiac .....                                     | 303     |
| <i>M.?</i> <i>prolixa</i> , n. s., White & Whitfield, 1862 .....         | 303     |
| <i>Porcellia</i> , Lévêillé .....                                        | 303     |
| <i>P. crassinoda</i> , n. s., White & Whitfield, 1862 .....              | 303     |
| <i>Bellerophon</i> , Montfort .....                                      | 304     |
| <i>B. vinculatus</i> , n. s., White & Whitfield, 1862 .....              | 304     |
| <i>B. perelegans</i> , n. s., White & Whitfield, 1862 .....              | 304     |
| <i>B. bilabiatius</i> , n. s., White & Whitfield, 1862 .....             | 304-305 |
| <i>Cephalopoda</i> .                                                     |         |
| <i>Goniatites</i> , De Haan .....                                        | 305     |
| <i>G. optimus</i> , n. s., White & Whitfield, 1862 .....                 | 305     |
| <i>Radiata</i> .                                                         |         |
| <i>Lophophyllum</i> , Edwards & Haime .....                              | 305     |
| <i>L. calceola</i> , n. s., White & Whitfield, 1862 .....                | 305-306 |
| <i>Zaphrentis</i> , Rafinesque .....                                     | 306     |
| <i>Z. acutus</i> , n. s., White & Whitfield, 1862 .....                  | 306     |
| <i>Farosites</i> , Lam. ....                                             | 306     |
| <i>F.</i> —[ <i>Whitfieldi</i> ] .....                                   | 306     |

### 3.

WHITE, C. A. Observations on the Summit Structure of *Pentremites*, the Structure and Arrangement of certain Parts of Crinoids, and Descriptions of New Species from the Carboniferous Rocks of Burlington, Iowa. < Boston Jour. Nat. Hist. (Boston Soc. Nat. Hist.), vol. vii, pp. 481-506. Boston, 1863.

Same. Boston, 1863. 8vo, pp. 581-506. Fifty separates printed without title-page, covers, or repaging.

The summit structure of *Pentremites norwoodi*, *P. stelliformis*, *P. lineatus*, and *P. elongatus* is noticed. Instances of the recuperative power of Crinoids are also given. The genus *Cæliocrinus* is proposed, and five species of Crinoids are described.

Some observations on certain modifications of the structure of the probosces of *Actinocrinus* are given, p. 489-491.

|                                                  | Page.   |
|--------------------------------------------------|---------|
| <i>Cæliocrinus</i> *, n. g., White, 1863 .....   | 499-501 |
| <i>C. subspinosus</i> , n. s., White, 1863 ..... | 501-502 |
| <i>Platycrinus</i> , Miller .....                | 502     |
| <i>P. verrucosus</i> , n. s., White, 1863 .....  | 502-503 |
| <i>P. incomptus</i> , n. s., White, 1863 .....   | 503-504 |
| <i>Cyathocrinus</i> , Miller .....               | 504     |
| <i>C. lamellosus</i> , n. s., White, 1863 .....  | 504-505 |
| <i>Scaphiocrinus</i> , Hall .....                | 505     |
| <i>S. rusticellus</i> , n. s., White, 1863 ..... | 505-506 |

\* Κοιλία, venter; κρίνον, lilium.

## 4.

WHITE, C. A. Descriptions of new species of Fossils from the Devonian and Carboniferous Rocks of the Mississippi Valley. < Proc. Boston Soc. Nat. Hist., vol. ix, pp. 8-33. Boston, 1865.

Same. Boston, 1862. 8vo, pp. 8-33. Fifty separates printed without title-page, covers, or repaging.

Forty-five species and two varieties of fossils are described, and the genera *Belemnocrinus* and *Acambona* are proposed. The author now regards the latter as identical with *Eumicrotis*, Hall.

*Echinodermata.*

Page.

*Crinoidea.*

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| <i>Cyathocrinus</i> , Miller .....                                        | 8     |
| <i>C. rigidus</i> , n. s., White, 1862 .....                              | 8     |
| <i>C. kelloggi</i> , n. s., White, 1862 .....                             | 8-9   |
| <i>Poteriocrinus</i> , Miller .....                                       | 9     |
| <i>P. ob-ancus</i> , n. s., White, 1862 .....                             | 9     |
| <i>P. sulignoides</i> , n. s., White, 1862 .....                          | 10    |
| <i>P. bursaformis</i> , n. s., White, 1862 .....                          | 10-11 |
| <i>Bursacrinus</i> , Meek & Worthen .....                                 | 11    |
| <i>B. confirmatus</i> , n. s., White, 1862 .....                          | 11    |
| <i>Zocrinus</i> , Troost .....                                            | 11    |
| <i>Z. pectinipilatus</i> , n. s., White, 1862 .....                       | 11-12 |
| <i>Z. sacculus</i> , n. s., White, 1862 .....                             | 12-13 |
| <i>Z. sacculus</i> var. <i>concinus</i> , White, 1862 .....               | 13    |
| * <i>Belemnocrinus</i> , n. g., White, 1862 .....                         | 14    |
| <i>B. typus</i> , n. s., White, 1862, figs. 1 and 2, p. 13 .....          | 14-15 |
| <i>Actinocrinus</i> , Miller .....                                        | 15    |
| <i>A. quadrispinus</i> , n. s., White, 1862 .....                         | 15    |
| <i>A. wachsmuthi</i> , n. s., White, 1862 .....                           | 15-16 |
| <i>A. nashvillei</i> , Troost, var. <i>subtractus</i> , White, 1862 ..... | 16    |
| <i>Megistocrinus</i> , Owen & Shumard .....                               | 16    |
| <i>M. plenus</i> , n. s., White, 1862 .....                               | 16-17 |
| <i>M. crassus</i> , n. s., White, 1862 .....                              | 17    |
| <i>Platycrinus</i> , Miller .....                                         | 17    |
| <i>P. pleurocrinens</i> , n. s., White, 1862 .....                        | 17-18 |
| <i>P. quinquepodus</i> , n. s., White, 1862 .....                         | 18-19 |
| <i>Dichocrinus</i> , Munster .....                                        | 19    |
| <i>D. angustus</i> , n. s., White, 1862 .....                             | 19    |
| <i>D. crassitextus</i> , n. s., White, 1862 .....                         | 19-20 |
| <i>Pentronites</i> , Say .....                                            | 20    |
| <i>P. sirius</i> , n. s., White, 1862, fig. 3, p. 20 .....                | 20-21 |

*Mollusca.**Gasteropoda.*

|                                                   |       |
|---------------------------------------------------|-------|
| <i>Porcellia</i> , Léveillé .....                 | 21    |
| <i>P. obliquinoda</i> , n. s., White, 1862 .....  | 21    |
| <i>Bellerophon</i> , Montfort .....               | 21    |
| <i>B. pannus</i> , n. s., White, 1862 .....       | 21    |
| <i>B. scriptiferus</i> , n. s., White, 1862 ..... | 21-22 |
| <i>Euomphalus</i> , Sowerby .....                 | 22    |
| <i>E. roberti</i> , n. s., White, 1862 .....      | 22    |

*Pteropoda.*

|                                             |       |
|---------------------------------------------|-------|
| <i>Conularia</i> , Miller .....             | 22    |
| <i>C. byblis</i> , n. s., White, 1862 ..... | 22    |
| <i>C. victa</i> , n. s., White, 1862 .....  | 22-23 |

*Brachiopoda.*

|                                                                |       |
|----------------------------------------------------------------|-------|
| <i>Rhynchonella</i> , Fischer .....                            | 23    |
| <i>R. caput-testudinis</i> , n. s., White, 1862 .....          | 23    |
| <i>R. ottumwa</i> , n. s., White, 1862 .....                   | 23-24 |
| <i>Spirifer</i> , Sowerby .....                                | 24    |
| <i>S. glans-cerasus</i> , n. s., White, 1862 .....             | 24    |
| Observations on the genus <i>Spiriferina</i> , d'Orbigny ..... | 24-25 |

|                                                                            | Page. |
|----------------------------------------------------------------------------|-------|
| <i>S. ? subtexta</i> , n. s., White, 1862 .....                            | 25    |
| <i>Cyrtia</i> , Dalman .....                                               | 25    |
| <i>C. curvilineata</i> , n. s., White, 1862 .....                          | 25-26 |
| <i>Ambocelia</i> , Hall .....                                              | 26    |
| <i>A. (Spirifer ?) minuta</i> , n. s., White, 1862 .....                   | 26    |
| * <i>Acambona</i> , n. g., White, 1872 .....                               | 27    |
| <i>A. prima</i> , n. s., White, 1862, figs. 1 & 2, p. 27 .....             | 27-28 |
| <i>Retzia</i> , King, <i>Acambona</i> , White .....                        | 28    |
| <i>R. (Acambona ?) altirostris</i> , n. s., White, 1862 .....              | 28    |
| <i>Streptorhynchus</i> , King .....                                        | 28    |
| <i>S. lens</i> , n. s., White, 1862 .....                                  | 28-29 |
| <i>Productus</i> , Sowerby .....                                           | 29    |
| <i>P. viminalis</i> , n. s., White, 1862 .....                             | 29    |
| <i>Chonetes</i> , Fischer .....                                            | 29    |
| <i>C. geniculata</i> , n. s., White, 1862 .....                            | 29    |
| <i>Crania</i> , Retzius .....                                              | 29    |
| <i>C. sheldoni</i> , n. s., White, 1862 .....                              | 29-30 |
| <i>C. reposita</i> , n. s., White, 1862 .....                              | 30    |
| <i>Discina</i> , Lamarck .....                                             | 30    |
| <i>D. capax</i> , n. s., White, 1862 .....                                 | 30    |
| <i>Lingula</i> , Bruguière .....                                           | 30    |
| <i>L. halli</i> , n. s., White, 1862 .....                                 | 30    |
| <i>Conchifera.</i>                                                         |       |
| <i>Aviculopecten</i> , McCoy .....                                         | 31    |
| <i>A. gradocostus</i> , n. s., White, 1862 .....                           | 31    |
| <i>Cardiomorpha</i> , de Koninck, <i>Cardiopsis</i> , Meek & Worthen ..... | 31    |
| <i>C. (Cardiopsis ?) parvirostris</i> , n. s., White, 1862 .....           | 31    |
| <i>Gervillia</i> , DeFrance .....                                          | 31    |
| <i>G. strigosa</i> , n. s., White, 1862 .....                              | 31    |
| <i>Zoophyta.</i>                                                           |       |
| <i>Zaphrentis</i> , Rafinesque et Clifford .....                           | 31    |
| <i>Z. elliptica</i> , n. s., White, 1862 .....                             | 31-32 |
| <i>Z. glans</i> , n. s., White, 1862 .....                                 | 32    |
| <i>Syringopora</i> , Goldfuss .....                                        | 32    |
| <i>S. harveyi</i> , n. s., White, 1862 .....                               | 32    |
| <i>Striatopora</i> , Hall .....                                            | 32    |
| <i>S. carbonaria</i> , n. s., White, 1862 .....                            | 32    |
| <i>Nullipora ? obtecta</i> , n. s., White, 1862 .....                      | 33    |

5.

WHITE, C. A. Fœtal hydrocephalus. <Chicago Medical Journal, vol. xxii, pp. 55-57. Chicago, 1865.

A report of an obstetrical case in which the child's cranium was too much enlarged to pass through the pelvic arch, and the serum was drawn off by an operation *in utero*.

6.

WHITE, C. A. Cerebro-spinal meningitis. <Chicago Medical Journal, vol. xxii, pp. 529-532. Chicago, 1865.

A report of a successful case, in which the application of dry heat to the extremities was a leading feature of the treatment.

7.

WHITE, C. A. The Soils of Iowa and their origin. <Report of the Secretary of the Iowa State Agricultural Society for the year 1865. pp. 245-267. Des Moines, 1866.

A popular lecture, delivered before the Society September 29, 1865. Some of the views expressed in the lecture have since been much modified by the author.



## 8.

WHITE, C. A. Observations on the genus *Belemnocrinus*. <Proc. Boston Soc. Nat. Hist., vol. x, p. 180. Boston, 1866.

This note is merely a rectification of the generic formula of *Belemnocrinus* as it was originally published in volume ix.

## 9.

WHITE, C. A. First Annual Report of Progress, of Charles A. White, State Geologist. pp. 1-4. Des Moines, 1867.

Probably not over fifty copies of this report were printed in its original form. It was reprinted on pages 5 to 8 of the first and second annual reports, Des Moines, 1868. See entry No. 20.

## 10.

WHITE, C. A. and ST. JOHN, O. H. Preliminary notice of new genera and species of fossils. By C. A. White, M. D., State Geologist, and O. H. St. John, Assistant. [pp. 1-3.] Iowa City, May 8, 1867.

This small publication of only fifty copies was made by the Iowa State Geological Survey. Four species are described. The genus *Meekella* proposed, *Cryptacanthia* suggested; and the whole, together with other matter, was republished in Vol. I, Transactions of the Chicago Academy of Sciences. See entry No. 15.

*Protozoa*.

*Amphistegina*, White & St. John, 1867.

*Mollusca*.

*Aulosteges spondyliiformis*, n. s., White & St. John, 1867.

*Waldheimia compacta*, n. s., White & St. John, 1867.

*Beyrichia lithofactor*, n. s., White & St. John, 1867.

*Beyrichia lithofactor* var. *velata*, White & St. John, 1867.

*Meekella*, n. g., White & St. John, 1867.

## 11.

WHITE, C. A. Observations upon the Drift phenomena of Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xliii, pp. 301-305. New Haven, 1867.

Same. New Haven, 1867. 8vo., pp. 301-305. Twenty-five separates printed without covers, title-page, or repaging.

Mentions the occurrence of glacial striae upon rocks *in situ*.

## 12.

WHITE, C. A. A Sketch of the Geology of Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xliv, pp. 23-31. New Haven, 1867.

Same. New Haven, 1867. 8vo., pp. 23-31. Twenty-five separates printed without title-page, covers, or repaging.

It is shown that the limestones of the region discussed belong to the upper and not to the lower Carboniferous series, as had been supposed by some previous authors.

## 13.

WHITE, C. A. Drift phenomena in Southwestern Iowa. <Amer. Jour. Sci., 2d ser., vol. xlv, p. 119. New Haven, 1867.

This is an additional note to the article of the preceding entry, which was inadvertently omitted by the printer.

## 14.

WHITE, C. A. Exogenous leaves in the Cretaceous rocks of Iowa. <Amer. Jour. Sci., 2d ser., vol. xlv, p. 119. New Haven, 1867.

A note announcing the discovery of exogenous leaves, and showing that the "Nishnaboli sandstone" is identical with the Dakota group.

15.

WHITE, C. A., and ST. JOHN, O. H. Descriptions of new Subcarboniferous and Coal-Measure Fossils, collected upon the Geological Survey of Iowa, together with notice of new generic characters observed in two species of Brachiopods. <Trans. Chicago Acad. Sci., vol. i, pp. 115-127, figs. 1-12. Chicago, 1867.

Same. Chicago, 1867. pp. 115-127. Fifty separates printed without title-page, covers, or repaging.

Fourteen species are described, four of which were previously described in the paper, entry No. 10. The genus *Tomoceras* is proposed, and the previously suggested genera *Meekella* and *Cryptacanthia* are proposed and illustrated.

|                                                                                               | Page.    |
|-----------------------------------------------------------------------------------------------|----------|
| <i>Protozoa.</i>                                                                              |          |
| <i>Polypi.</i>                                                                                |          |
| <i>Cyathophyllidæ.</i>                                                                        |          |
| <i>Axophyllum</i> , Edwards & Haime.....                                                      | 115      |
| <i>A. rudis</i> , n. s., White & St. John, 1867.....                                          | 115-116  |
| <i>Amplexus</i> , Sowerby.....                                                                | 116      |
| <i>A. fragilis</i> , n. s., White & St. John, 1867.....                                       | 116      |
| <i>Crinoidea.</i>                                                                             |          |
| <i>Hydreinoocrinus</i> , De Koninck.....                                                      | 117      |
| <i>H. verrucosus</i> , n. s., White & St. John, 1867, fig. 1, p. 117.....                     | 117-118  |
| <i>Brachiopoda.</i>                                                                           |          |
| <i>Craniidæ.</i>                                                                              |          |
| <i>Crania</i> , Retzius.....                                                                  | 118      |
| <i>C. modesta</i> , n. s., White & St. John, 1867.....                                        | 118      |
| <i>Productidæ.</i>                                                                            |          |
| <i>Aulosteges</i> , Helmersen.....                                                            | 118      |
| <i>A. spondyliiformis</i> , n. s., White & St. John, 1867, fig. 2, p. 118.....                | 118      |
| <i>Terebratulidæ.</i>                                                                         |          |
| <i>Waldheimia</i> , King.....                                                                 | 119      |
| <i>W. ? compacta</i> , White & St. John, 1867, fig. 3, p. 119.....                            | 119      |
| <i>Meekella</i> , White & St. John, 1867.....                                                 | 120      |
| <i>M. striatocostata</i> , White & St. John, figs. 4 and 5, p. 120, fig. 6, p. 121.....       | 120-122  |
| <i>Pinnidæ.</i>                                                                               |          |
| <i>Pinna</i> , Linnæus.....                                                                   | 122      |
| <i>P. hinrichsiana</i> , n. s., White & St. John, 1867, fig. 7, a b, p. 122.....              | 122-123  |
| <i>Gasteropoda.</i>                                                                           |          |
| <i>Atlantidæ.</i>                                                                             |          |
| <i>Cyrtolites</i> , Conrad.....                                                               | 123      |
| <i>C. ? gillianus</i> , n. s., White & St. John, 1867, fig. 8, p. 123.....                    | 123      |
| <i>Cephalopoda.</i>                                                                           |          |
| <i>Nautilidæ.</i>                                                                             |          |
| <i>Nautilus divisus</i> , n. s., White & St. John, 1867, fig. 9, p. 124.....                  | 124      |
| <i>Nautilus (Cryptoceras) springeri</i> , n. s., White & St. John, 1867, fig. 10, p. 124..... | 124, 125 |
| <i>Crustacea.</i>                                                                             |          |
| <i>Cypridinidæ.</i>                                                                           |          |
| <i>Beyrichia</i> , McCoy.....                                                                 | 125      |
| <i>B. petrifactor</i> , n. s., White & St. John, 1867.....                                    | 125      |
| <i>B. petrifactor</i> var. <i>velata</i> , White & St. John, 1867.....                        | 126      |
| <i>B. fætoidea</i> , n. s., White & St. John, 1867, fig. 11, a b, p. 126.....                 | 126, 127 |
| <i>Cypridæ.</i>                                                                               |          |
| <i>Cythere</i> , Mueller.....                                                                 | 127      |
| <i>C. simplex</i> , n. s., White & St. John, 1867.....                                        | 127      |

16.

WHITE, C. A. Character of the Unconformability of the Iowa Coal-measures upon the Older Rocks. <Am. Jour. Sci., 2d ser., vol. xlv, pp. 331-334. New Haven, 1868.

Same. New Haven, 1868, 8vo., pp. 331-334. Twenty-five separates printed without title-page, covers, or repaging.

17.

WHITE, C. A. On Coal in Nebraska, with reference to a paragraph in the Geological Report of Dr. Hayden. <Am. Jour. Sci., 2d ser., vol. xlv., pp. 399-400. New Haven, 1868.

The paragraph referred to is on page 125 of the report of the Commissioner of the General Land Office for the year 1867.

18.

WHITE, C. A. Note on the shell-structure of certain Naiades. <Am. Jour. Sci., 2d ser., vol. xlv, pp. 400-401. New Haven, 1868.

The outer prismatic layer of the shell is noticed as a family character, not as a new discovery, as was supposed by Meek.

19.

WHITE, C. A. Note on "Cone-in-cone." <Am. Jour. Sci., 2d ser., vol. xlv, pp. 401-402. New Haven, 1868.

20.

WHITE, C. A. First and Second Annual Report of Progress by the State Geologist, and the Assistant and Chemist; on the Geological Survey of the State of Iowa; together with the substance of Popular Letters contributed to the Newspapers of the State during the years 1866 and 1867, in accordance with law; also extracts originally contributed to Scientific Journals as a part of the work of the Survey. pp. 1-284. Des Moines, 1868.

The brief first annual report (Entry No. 9) is reprinted in this volume, upon pages 5-8.

21.

WHITE, C. A. Lakes of Iowa, Past and Present. <American Naturalist, vol. ii, pp. 143-155. Salem, 1868.

Same. Salem, 1868, pp. 143-155. Thirty separates printed without title-page, covers, or repaging.

The Drift lakes, including the so-called walled lakes, are described, and the origin of the "walls" explained. Also the Bluff deposit of the Missouri River valley is shown to be the deposit of an ancient lake.

22.

WHITE, C. A. The Iowa Drift. <American Naturalist, vol. ii, pp. 615-616. Salem, 1869.

The derivation of the drift material from the underlying rocks, by their disintegration and comminution, is shown.

23.

WHITE, C. A. A trip to the Great Red Pipestone Quarry. <American Naturalist, vol. ii, pp. 644-653. Salem, 1869.

Same. Salem, 1869, 8vo., pp. 644-653. Thirty separates printed without title-page, covers, or repaging.

The quarry, the region, and the formation which contains the pipestone, are described.

24.

WHITE, C. A. Are Unios sensitive to light? <Am. Jour. Sci., 2d ser., vol. xlvii, pp. 280-281. New Haven, 1869.

An experiment is described, showing that the sensitiveness which Unios manifest when the sun's rays are suddenly intercepted by an opaque body, is due to an interruption of light rays, and not heat rays.

25.

WHITE, C. A. Announcement of the Existence of Cretaceous Rocks in Guthrie County, Iowa. <Proc. Amer. Ass. Adv. Sci., 17th Meeting. Chicago, 1868, vol. xvii, pp. 326-327. Cambridge, 1869.

26.

WHITE, C. A. Observation on the Red Quartzite Boulders of Western Iowa; and their original ledges of Red Quartzite in Iowa, Dakota, and Minnesota. <Proc. Amer. Ass. Adv. Sci., 17th Meeting. Chicago, 1868, vol. xvii, pp. 340-342. Cambridge, 1869.

Same. Cambridge, 1869, pp. 340-342. Thirty separates printed without title page, covers, or repaging.

27.

WHITE, C. A. Report on the Geological Survey of the State of Iowa, to the Thirtieth General Assembly, January, 1870, Containing results of Examinations and Observations made within the years 1866, 1867, 1868, and 1869. By Charles A. White, M. D., Geological Corps; Charles A. White, State Geologist; Orestes H. St. John, Assistant; Rush Emery, Chemist. Vols. I and II. Des Moines, 1870.

CONTENTS OF VOLUME I.

|                                                                                                          | Page.   |
|----------------------------------------------------------------------------------------------------------|---------|
| Introduction, including popular explanation of geological subjects .....                                 | 7-27    |
| Part First: Physical Geography and Surface Geology; Four plates and two maps ..                          | 28-166  |
| Chapter I. Surface features .....                                                                        | 28-81   |
| Chapter II. Surface deposits .....                                                                       | 82-121  |
| Chapter III. Soils, &c. ....                                                                             | 122-138 |
| Chapter IV. Climate (by T. S. Parvin) .....                                                              | 139-164 |
| Part Second: General Geology; Three plates and three sections .....                                      | 165-294 |
| Chapter I. Azoic, Lower Silurian, Upper Silurian, and Devonian systems ....                              | 167-188 |
| ( <i>Spirithia</i> [ <i>Pachyphyllum</i> ] <i>woodmani</i> [n. s., White, 1870] is described on p. 188.) |         |
| Chapter II. Carboniferous system .....                                                                   | 189-230 |
| Chapter III. Carboniferous system continued .....                                                        | 231-263 |
| Chapter IV. Carboniferous system concluded .....                                                         | 264-284 |
| Chapter V. Cretaceous system .....                                                                       | 285-294 |
| Part Third: County and Regional Geology .....                                                            | 295-381 |
| Chapter I. Geology of Southwestern Iowa; and one section .....                                           | 296-381 |
| Glossary .....                                                                                           | 383-386 |
| Index .....                                                                                              | 387-391 |

CONTENTS OF VOLUME II.

|                                                                                                                                                                     |         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Part First: County and Regional Geology .....                                                                                                                       | 1-274   |
| Chapter I. Geology of the Middle Region of Western Iowa and other counties<br>(by O. H. St. John); with one plate and one section .....                             | 1-200   |
| Chapter II. Northwestern Iowa; One plate .....                                                                                                                      | 201-232 |
| Chapter III. Middle Region of Northern Iowa .....                                                                                                                   | 233-253 |
| Chapter IV. Geology of the Coal counties; One plate .....                                                                                                           | 254-274 |
| Part Second: Mineralogy, Lithology, and Chemistry .....                                                                                                             | 275-402 |
| Chapter I. Peat and Petroleum; One plate .....                                                                                                                      | 275-292 |
| Chapter II. Gypsum and other sulphates of the Alkaline Earths .....                                                                                                 | 293-306 |
| Chapter III. Building materials, metals, and miscellaneous substances .....                                                                                         | 307-342 |
| Chapter IV. Chemist's Report (by Rush Emery).                                                                                                                       |         |
| Section I. Rocks and minerals .....                                                                                                                                 | 345-354 |
| Section II. Waters .....                                                                                                                                            | 354-357 |
| Section III. Coals .....                                                                                                                                            | 357-397 |
| Section IV. Peats .....                                                                                                                                             | 397-402 |
| Appendices:                                                                                                                                                         |         |
| Appendix A. Elevation in feet of points along the lines of Iowa railroads, both<br>completed and projected (by the chief engineers of the respective<br>roads ..... | 405-418 |
| Appendix B. Catalogue of the Birds of Iowa (by J. A. Allen) .....                                                                                                   | 419-427 |
| Appendix C. Government Surveys of the Public Lands (by C. W. Irish) .....                                                                                           | 428-435 |
| One Geological map of the State, colored.                                                                                                                           |         |



## 28.

WHITE, C. A. Natural Science in our Common Schools. <Iowa School Journal, vol. xii, pp. 1-4. Des Moines, 1870.

Methods of interesting school children in natural history are suggested.

## 29.

WHITE, C. A. Kjøekkenmøddings in Iowa. <American Naturalist, vol. iii, pp. 54-55. Salem, 1870.

This is the first public announcement of the fact that the shell-heaps of the western rivers are true kjøekkenmøddings.

## 30.

WHITE, C. A. Lilies of the Rocks. <American Naturalist, vol. iii, pp. 553-554. Salem, 1870.

A review of part of an article by G. Hinrichs, in the August No., vol. iii, of the Naturalist, entitled "Lilies of the Fields, of the Rocks, and the Clouds." This note is signed "Zoologus."

## 31.

WHITE, C. A. Prairie Fires. <American Naturalist, vol. v, pp. 68-70. Salem, 1871.

An incident of personal experience related.

## 32.

WHITE, C. A. Albino Flowers. <American Naturalist, vol. v, pp. 161-162. Salem, 1871.

It is observed that a certain cluster of the common field clover produced white flowers one year, and those of the ordinary red color the next. Also, that a specimen of white *Liatris* was observed, the latter being deemed important because the rose-red color is common to the whole genus.

## 33.

WHITE, C. A. [Remarks on the "Geological History of the Gulf of Mexico" by Prof. E. W. Hilgard.] <American Naturalist, vol. v, pp. 519-520. Salem, 1871.

These remarks were made before the American Association for the Advancement of Science, at the 20th (Indianapolis) meeting, 1871, with reference to the paper above cited.

## 34.

WHITE, C. A. [Remarks on the homologies of the Carpal and Tarsal bones in Birds.] <American Naturalist, vol. v, p. 525. Salem, 1871.

These remarks were made before the American Association for the Advancement of Science, 20th meeting (Indianapolis), with reference to a paper read by E. S. Morse, "On the Carpal and Tarsal bones of Birds."

## 35.

WHITE, C. A. Mammoth Cave. <University Reporter, [a college paper of the Iowa State University.] 4to. Vol. iv, pp. 81-83. Iowa City, 1872.

An account of a visit to Mammoth Cave, Kentucky, in company with the American Association for the Advancement of Science.

## 36.

WHITE, C. A. Manual of Physical Geography and Institutions of the State of Iowa. 4to. pp. 1-85, pls. i-iii and figs. Davenport, 1873.

This book was prepared for use in the schools of the State. It embraces an account of the history, constitution, and school laws of the State; its educational, charitable, and penal institutions, land surveys, elections, taxes, &c. In 1883 an edition was issued purporting to be the 15th and also to be revised, but it has never been revised by the author since the first edition.

37.

WHITE, C. A. Woodpeckers Tapping Sugar Trees. <American Naturalist, vol. vii, p. 496. Salem, 1873.

Woodpeckers were observed to peck holes in the bark of young and sound sugar maples, evidently to get the sap.

38.

WHITE, C. A. Kjækkenmøddings de l'Amérique du nord. <Congrès International d'Anthropologie et d'Archéologie. Préhistoriques; Compte rendu de la cinquième session à Bologne, 1871. pp. 379-389. Bologna (Italy), 1873.

Same. Bologna (Italy), 1873. 8vo. pp. 15. Thirty separates printed with title-page and repaging.

This paper embraces a general review of the subject of shell-heaps in North America as known up to that date.

39.

WHITE, C. A. On Spontaneous fission? in Zaphrentis. <Amer. Jour. Sci., 3d ser., vol. v., p. 72. New Haven, 1873.

A specimen of *Zaphrentis spinulifera*, Hall is described, which seemed to be a case of spontaneous fission. The author now thinks it probable that it was the result of a twin polyp, or that the fission took place at a very early stage in the formation of the corallite

40.

WHITE, C. A. On the Eastern Limit of Cretaceous Deposits in Iowa. <Proc. Amer. Ass. Adv. Sci. ? 21st meeting (Dubuque), 1872, vol. xxi, pp. 187-192. Cambridge, 1873.

Same. Cambridge, 1873. 8vo. pp. 187-192. Fifty separates printed without title-page, covers, or repaging.

The discovery is announced of Cretaceous fossils in the drift or glacier-disturbed Cretaceous deposits in Howard, Black Hawk, and Johnson Counties, Iowa; showing that the Cretaceous deposits once extended as far eastward as Eastern Iowa and Southeastern Minnesota.

41.

WHITE, C. A. The proposed genus *Anomalodonta* of Miller identical with the earlier *Megaptera* of Meek. <Amer. Jour. Sci., 3d ser., vol. viii, pp. 218-219. New Haven, 1874.

Meek's claim to priority is defended against that of Miller. The note bears only the initials of the author, "C. A. W."

42.

WHITE, C. A. Artificial Shell-heaps of Fresh-water Mollusks. <Proc. Amer. Ass. Adv. Sci., 22d meeting, Portland, 1873, pp. 133-137. Salem, 1874.

Same. Salem, 1874. 8vo. pp. 133-137. Fifty separates printed without title-page, covers, or repaging.

It is herein shown that the fresh-water mollusks were extensively used as food by the aboriginal inhabitants.

43.

WHITE, C. A. Preliminary Report upon Invertebrate Fossils collected by the Expeditions of 1871, 1872, and 1873, with Descriptions of New Species. <Engineer Department, U. S. Army. Geographical and Geological Explorations and Surveys west of the 100th meridian. First Lieut. George M. Wheeler, Corps of Engineers, in charge. pp. 1-27. Washington, 1874.

Thirty-nine species are described as new, and five others are noticed. They are all re-described and figured in part i, vol. iv, Report upon Geographical and Geological Explorations and Surveys West of the 100th Meridian. See entry No. 48. *Anchura nuptialis* is a Cretaceous species, and herein wrongly referred to the Jurassic.

## LOWER SILURIAN

## PRIMORDIAL PERIOD.

*Plantæ.*

|                                                | Page. |
|------------------------------------------------|-------|
| <i>Cruziana</i> , d'Orbigny .....              | 5     |
| <i>C. linnarsoni</i> , n. s., White, 1874..... | 5     |
| <i>C. rustica</i> , n. s., White, 1874 .....   | 5-6   |

*Animalia.**Brachiopoda.*

|                                                |   |
|------------------------------------------------|---|
| <i>Acrotreta</i> , Kutorga .....               | 6 |
| <i>A. ? subsidua</i> , n. s., White, 1874..... | 6 |
| <i>Trematis</i> , Sharpe .....                 | 6 |
| <i>T. pannulus</i> , n. s., White, 1874.....   | 6 |

*Pteropoda.*

|                                      |   |
|--------------------------------------|---|
| <i>Hypolithes</i> , Eichwald .....   | 6 |
| <i>H. primordialis</i> , Hall? ..... | 6 |

*Crustacea.*

|                                                  |     |
|--------------------------------------------------|-----|
| <i>Agnostus</i> , Brongniart .....               | 7   |
| <i>A. interstricta</i> , n. s., White, 1874..... | 7   |
| <i>Olenellus</i> , Hall .....                    | 7   |
| <i>O. gilberti</i> , Meek MSS.....               | 7-8 |
| <i>O. powelli</i> , Meek MSS.....                | 8   |

## CANADIAN PERIOD.

*Hydrozoa.*

|                                              |   |
|----------------------------------------------|---|
| <i>Phyllograptus</i> , Hall .....            | 9 |
| <i>P. loringi</i> , n. s., White, 1874 ..... | 9 |

*Brachiopoda.*

|                                                  |      |
|--------------------------------------------------|------|
| <i>Acrotreta</i> , Kutorga .....                 | 9    |
| <i>A. pycnidicula</i> , n. s., White, 1874.....  | 9    |
| <i>Lingula</i> , Bruguière .....                 | 9    |
| <i>L. ? manticula</i> , n. s., White, 1874 ..... | 9-10 |
| <i>Strophomena</i> , Rafinesque .....            | 10   |
| <i>S. fontinalis</i> , n. s., White, 1874 .....  | 10   |

*Gasteropoda.*

|                                                  |    |
|--------------------------------------------------|----|
| <i>Bellerophon</i> , Montfort .....              | 10 |
| <i>B. allegoricus</i> , n. s., White, 1874 ..... | 10 |

*Cephalopoda.*

|                                            |       |
|--------------------------------------------|-------|
| <i>Orthoceras</i> , Breynius .....         | 10    |
| <i>O. colon</i> , n. s., White, 1874 ..... | 10-11 |

*Crustacea.*

|                                                  |       |
|--------------------------------------------------|-------|
| <i>Lepiditida</i> , Rouault .....                | 11    |
| <i>L. bicia</i> , n. s., White, 1874 .....       | 11    |
| <i>Megalaspis</i> , Angelin .....                | 11    |
| <i>M. belemnites</i> , n. s., White, 1874 .....  | 11-12 |
| <i>Dicelloccephalus</i> , Owen .....             | 12    |
| <i>D. flagricaudus</i> , n. s., White, 1874..... | 12    |

## TRENTON PERIOD.

*Hydrozoa.*

|                                                                  |       |
|------------------------------------------------------------------|-------|
| <i>Graptolithus</i> , Linnaeus .....                             | 12    |
| <i>G. (Diplograptus) hypniiformis</i> , n. s., White, 1874 ..... | 12-13 |
| <i>G. quadriramus</i> , Hall? .....                              | 13    |
| <i>G. (Climacograptus ?) ramulus</i> , n. s., White, 1874.....   | 13    |
| <i>Rhynchonella</i> , Fischer .....                              | 14    |
| <i>R. argentaria</i> , n. s., White, 1874 .....                  | 14    |

## CARBONIFEROUS.

## SUBCARBONIFEROUS PERIOD.

*Polypi.*

|                                                    |    |
|----------------------------------------------------|----|
| <i>Parasite</i> , Lauryel .....                    | 15 |
| <i>P. whitei</i> , M. White & Whitefield MSS ..... | 15 |

*Blastoidea.*

|                                                 |    |
|-------------------------------------------------|----|
| <i>Granuloblastus</i> , Trond .....             | 15 |
| <i>G. labellatus</i> , n. s., White, 1874 ..... | 15 |

Page.

*Orinoidea.*

|                                              |       |
|----------------------------------------------|-------|
| <i>Platyerinus</i> , Miller .....            | 15    |
| <i>Platyerinus</i> , ——— ? White, 1874.....  | 15-16 |
| <i>Actinocrinus</i> , Miller .....           | 16    |
| <i>A. riaticus</i> , n. s., White, 1874..... | 16    |

*Brachiopoda.*

|                                                |    |
|------------------------------------------------|----|
| <i>Spirigera</i> , d'Orbigny .....             | 16 |
| <i>S. monticola</i> , n. s., White, 1874 ..... | 16 |

CARBONIFEROUS PERIOD.

*Echinodermata.*

|                                               |       |
|-----------------------------------------------|-------|
| <i>Archæocylaris</i> , McCoy .....            | 17    |
| <i>A. tradifer</i> , n. s., White, 1874 ..... | 17-18 |

*Polyzoa.*

|                                               |       |
|-----------------------------------------------|-------|
| <i>Glaucome</i> , Goldfuss .....              | 18    |
| <i>G. nereidis</i> , n. s., White, 1874.....  | 18-19 |
| <i>Polypora</i> , McCoy .....                 | 19    |
| <i>P. stragula</i> , n. s., White, 1874 ..... | 19    |

*Brachiopoda.*

|                                                                                   |       |
|-----------------------------------------------------------------------------------|-------|
| <i>Chonetes</i> , Fischer .....                                                   | 19    |
| <i>C. platymota</i> , n. s., White, 1874 .....                                    | 19    |
| <i>Rhynchonella</i> , Fischer .....                                               | 19    |
| <i>R. wasatchensis</i> , n. s., White, 1874.....                                  | 19-20 |
| <i>R. metallica</i> , n. s., White, 1874 .....                                    | 20    |
| <i>Spirifer</i> , Sowerby .....                                                   | 20    |
| <i>S. (Martinia) glaber</i> var. <i>contracta</i> , Meek & Worthen .....          | 20-21 |
| <i>Spiriferina</i> , d'Orbigny .....                                              | 21    |
| <i>S. spinosa</i> , Norwood & Pratten, var. <i>campestris</i> , White, 1874 ..... | 21    |
| <i>Dielsma</i> , King .....                                                       | 21    |
| <i>D. ? bovidens</i> , Morton, sp .....                                           | 21    |

*Conchifera.*

|                                               |       |
|-----------------------------------------------|-------|
| <i>Ariculopecten</i> , McCoy .....            | 21    |
| <i>A. corejana</i> , n. s., White, 1874 ..... | 21-22 |
| <i>Monopteria</i> , Meek & Worthen .....      | 22    |
| <i>M. marian</i> , n. s., White, 1874 .....   | 22    |

*Gasteropoda.*

|                                                |       |
|------------------------------------------------|-------|
| <i>Macrocheilus</i> , Phillips .....           | 22    |
| <i>M. angulifera</i> , n. s., White, 1874..... | 22-23 |
| <i>Dentalium</i> , Linnaeus .....              | 23    |
| <i>D. canna</i> , n. s., White, 1874 .....     | 23    |

MESOZOIC.

JURASSIC PERIOD.

*Conchifera.*

|                                              |    |
|----------------------------------------------|----|
| <i>Camptonectes</i> , Agassiz .....          | 23 |
| <i>C. stagijs</i> , n. s., White, 1874 ..... | 23 |

*Gasteropoda.*

|                                                  |    |
|--------------------------------------------------|----|
| <i>Neritina</i> , Lamarck .....                  | 24 |
| <i>N. phaseolaris</i> , n. s., White, 1874 ..... | 24 |
| <i>Aachura</i> , Conrad .....                    | 24 |
| <i>A. nuptialis</i> , n. s., White, 1874.....    | 24 |

CRETACEOUS PERIOD.

*Conchifera.*

|                                                       |       |
|-------------------------------------------------------|-------|
| <i>Pinna</i> , Linnaeus .....                         | 24    |
| <i>P. petrina</i> , n. s., White, 1874 .....          | 24-25 |
| <i>Camptonectes</i> , Agassiz .....                   | 26    |
| <i>C. platessa</i> , n. s., White, 1874 .....         | 25    |
| <i>Inoceramus</i> , Sowerby .....                     | 25    |
| <i>I. dimidijs</i> , n. s., White, 1874 .....         | 25-26 |
| <i>Leipistha</i> , Meek .....                         | 26    |
| Subgenus <i>Psilomya</i> , Meek .....                 | 26    |
| <i>L. (Psilomya) meekii</i> , n. s., White, 1874..... | 26    |

*Gasteropoda.*

|                                                 |    |
|-------------------------------------------------|----|
| <i>Cassiope</i> , Coquand .....                 | 27 |
| <i>C. whitfieldi</i> , n. s., White, 1874 ..... | 27 |



## 44.

WHITE, C. A. On the Equivalency of the Coal-Measures of the United States and Europe. < Proc. Amer. Ass. Adv. Sci., 23d Meeting (Hartford), 1874, pp. B, 35-38. Salem, 1875.

Same. Salem, 1875. 8vo, pp. 35-38. Thirty separates printed without title-page, covers, or repaging.

An affirmative opinion is expressed.

## 45.

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This is the first of a series of three articles written from the field. This one was written from Southern Wyoming, describing the country, and mentioning Powell's plan for having the arid region surveyed into irregular-shaped ranches, and not by the rectangular method in use in the humid regions.

## 46.

WHITE, C. A. The Far West. < Boston Daily Advertiser (newspaper), vol. 126, No. 108. Boston, November 4, 1875.

The second of a series of articles written from the field. This one is from Northern Utah, describing the vegetable products of that region.

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WHITE, C. A. The Far West. < Boston Daily Advertiser (newspaper), vol. 126, No. 115. Boston, November 12, 1875.

The third and last of a series of three articles written from the field. This was written from Northern Utah, describing the animals of that region.

## 48.

WHITE, C. A. Report upon the Invertebrate Fossils collected in portions of Nevada, Utah, Colorado, New Mexico, and Arizona, by Parties of the Expeditions of 1871, 1872, 1873, and 1874. < Report upon Geographical and Geological Explorations and Surveys West of the 100th Meridian, in charge of First Lieut. Geo. M. Wheeler, Corps of Engineers, U. S. Army. 4to. vol. iv. part i, Paleontology. pp. 1-219, pls. i-xxi. Washington, 1875.

Same. Washington: Government Printing Office, 1875. 4to, pp. 219, and 21 plates of illustrations. Two hundred and fifty separates printed and bound in paper covers, and 30 copies printed and bound separately in boards for the author, with a different imprint upon the back.

This report comprises descriptions and illustrations of fossils and some general observations upon the periods which they represent. One hundred and seventy-five species are described and illustrated, from the Primordial, Silurian, Carboniferous, Jurassic, Cretaceous, and Tertiary rocks, the majority of which were formerly known. A few, however, are herein described for the first time, but the new forms of these collections were mostly described in the preliminary report (Entry No. 43). The genus *Lispodesthes* is here proposed.

## LOWER SILURIAN AGE.

## PRIMORDIAL PERIOD.

*Plantae.**Cryptogamia.**Thallogenes.*

|                                                               |       |
|---------------------------------------------------------------|-------|
| <i>Cruziana</i> , d'Orbigny, 1842 .....                       | 32    |
| <i>C. linnarssoni</i> , White, 1874, pl. i, figs. 2 a-c ..... | 32-33 |
| <i>C. rustica</i> , White, 1874, pl. i, figs. 1 a, b .....    | 33-34 |

Animalia.

Brachiopoda.

|                                                                              |       |
|------------------------------------------------------------------------------|-------|
| <i>Aerotreta</i> , Kutorga, 1848 .....                                       | 34    |
| <i>A. ? subsidua</i> , White, 1874, pl. i, figs. 3 <i>a-d</i> .....          | 34-36 |
| <i>Trematis</i> , Sharpe, 1847 .....                                         | 36    |
| <i>T. pannulus</i> , White, 1874, pl. i, figs. 4 <i>a</i> and <i>b</i> ..... | 36-37 |

Gasteropoda.

|                                                                      |       |
|----------------------------------------------------------------------|-------|
| <i>Hyolithes</i> , Eichwald, 1840 .....                              | 37    |
| <i>H. primordialis</i> ? Hall? 1861, pl. i, figs. 5 <i>a-e</i> ..... | 37-38 |

Crustacea.

|                                                                                    |       |
|------------------------------------------------------------------------------------|-------|
| <i>Agnostus</i> , Brongniart, 1821 .....                                           | 38    |
| <i>A. interstrictus</i> , White, 1874, pl. ii, figs. 5 <i>a</i> and <i>b</i> ..... | 38-40 |
| <i>Conocoryphe</i> , Corda, 1847 .....                                             | 40    |
| Subgenus <i>Ptychoparia</i> , Corda, 1847 .....                                    | 40    |
| <i>C. (Ptychoparia) kingii</i> , Meek, 1870, pl. ii, figs. 2 <i>a-c</i> .....      | 40-43 |
| <i>Asaphiscus</i> , Meek, 1872 .....                                               | 43    |
| <i>A. wheeleri</i> , Meek, 1872, pl. ii, figs. 1 <i>a-f</i> .....                  | 43-44 |
| <i>Olenellus</i> , Hall, 1861 .....                                                | 44    |
| <i>O. gilberti</i> , Meek, MSS., 1874, pl. ii, figs. 3 <i>a-e</i> .....            | 44-46 |
| <i>O. howelli</i> , Meek, MSS., 1874, pl. ii, figs. 4 <i>a</i> and <i>b</i> .....  | 47-48 |
| <i>Vestigia</i> , White, 1875, pl. i, figs. 6, <i>a</i> and <i>b</i> .....         | 49    |

CANADIAN PERIOD.

Rhizopoda.

|                                              |    |
|----------------------------------------------|----|
| <i>Receptaculites</i> , DeFrance, 1827 ..... | 50 |
| <i>Receptaculites</i> ——— (?) .....          | 50 |

Hydrozoa.

|                                                                               |       |
|-------------------------------------------------------------------------------|-------|
| <i>Phyllograptus</i> , Hall, 1858 .....                                       | 51    |
| <i>P. loringi</i> , White, 1874, pl. iii, figs. 1 <i>a</i> and <i>b</i> ..... | 51-52 |

Brachiopoda.

|                                                                                   |       |
|-----------------------------------------------------------------------------------|-------|
| <i>Lingula</i> , Bruguière, 1789 .....                                            | 52    |
| <i>L. ? manticula</i> , White, 1874, pl. iii, figs. 2 <i>a</i> and <i>b</i> ..... | 52-53 |
| <i>Aerotreta</i> , Kutorga, 1848 .....                                            | 53    |
| <i>A. pyxidica</i> , White, 1874, pl. iii, figs. 3 <i>a</i> and <i>b</i> .....    | 53-54 |
| <i>Strophomena</i> , Rafinesque, 1827 .....                                       | 54    |
| <i>S. fontinalis</i> , White, 1874, pl. iii, figs. 4 <i>a-c</i> .....             | 54-55 |
| <i>Orthis</i> , Dalman, 1828 .....                                                | 53    |
| <i>O. electra</i> , Billings (?) .....                                            | 55    |

Gasteropoda.

|                                                                        |       |
|------------------------------------------------------------------------|-------|
| <i>Bellerophon</i> , Montfort, 1808 .....                              | 55    |
| <i>B. allegoricus</i> , White, 1874, pl. iii, figs. 6 <i>a-c</i> ..... | 55-56 |

Cephalopoda.

|                                                                                 |       |
|---------------------------------------------------------------------------------|-------|
| <i>Orthoceras</i> , Breynius, 1732 .....                                        | 56    |
| Subgenus <i>Camarcoceras</i> , Conrad, 1842 .....                               | 56    |
| <i>O. (Camarcoceras) colon</i> , White, 1874, pl. iii, figs. 5 <i>a-d</i> ..... | 56-57 |
| <i>Cyrtoceras</i> , Goldfuss, 1833 .....                                        | 57    |
| <i>C. ———</i> (?), White, 1875 .....                                            | 57-58 |

Crustacea.

|                                                                                      |       |
|--------------------------------------------------------------------------------------|-------|
| <i>Laperditia</i> , Rouault, 1851 .....                                              | 58    |
| <i>L. bivia</i> , White, 1874, pl. iii, figs. 7 <i>a-d</i> .....                     | 58-59 |
| <i>Megalaspis</i> , Angelin, 1854 .....                                              | 59    |
| <i>M. belemnurus</i> , White, 1874, pl. iii, fig. 9 .....                            | 59-60 |
| <i>Dicelbocephalus</i> , Owen, 1852 .....                                            | 60    |
| <i>D. ? flagricaudus</i> , White, 1874, pl. iii, figs. 8 <i>a</i> and <i>b</i> ..... | 60-61 |

TRENTON PERIOD.

Hydrozoa.

|                                                                                                  |       |
|--------------------------------------------------------------------------------------------------|-------|
| <i>Graptolithus</i> , Linnæus, 1736 .....                                                        | 62    |
| Subgenus <i>Climacograptus</i> , Hall, 1865 .....                                                | 62    |
| <i>G. (Climacograptus) ramulus</i> , White, 1874, pl. iv, figs. 3 <i>a-c</i> .....               | 62-63 |
| Subgenus <i>Diplograptus</i> , McCoy, 1850 .....                                                 | 63    |
| <i>G. (Diplograptus) hypniiformis</i> , White, 1874, pl. iv, figs. 4 <i>a</i> and <i>b</i> ..... | 63-64 |
| <i>G. (Diplograptus) pristis</i> , Hall (?), 1847, pl. iv, figs. 2 <i>a</i> and <i>b</i> .....   | 65    |
| <i>G. quadrimucronatus</i> , Hall (?), 1865, pl. iv, figs. 1 <i>a</i> and <i>b</i> .....         | 65-66 |

Actinozoa.

|                                                               |       |
|---------------------------------------------------------------|-------|
| <i>Monticulipora</i> , d'Orbigny, 1850 .....                  | 66    |
| <i>M. dalii</i> , Edwards & Haime, 1851, pl. iv, fig. 5 ..... | 66-67 |

|                                                                                                               | Page. |
|---------------------------------------------------------------------------------------------------------------|-------|
| <i>Favosites</i> , Lamarek, 1816.....                                                                         | 67    |
| <i>F.</i> ——— (?) White, 1875.....                                                                            | 67    |
| <i>Favistella</i> , Hall, 1847.....                                                                           | 67    |
| <i>F. stellata</i> , Hall, 1847, pl. iv, figs. 6 <i>a-c</i> .....                                             | 67-68 |
| <i>Zaphrentis</i> , Rafinesque et Clifford, 1820.....                                                         | 68    |
| <i>Z.</i> ——— (?) White, 1875.....                                                                            | 68    |
| <i>Brachiopoda.</i>                                                                                           |       |
| <i>Strophomena</i> , Rafinesque, 1827.....                                                                    | 69    |
| <i>S. filitexta</i> , Hall, 1847, pl. iv, fig. 8.....                                                         | 69-70 |
| <i>Leptæna</i> , Dalman, 1828.....                                                                            | 70    |
| <i>L. sericea</i> , Sowerby (?) , pl. iv, fig. 7.....                                                         | 70    |
| <i>Orthis</i> , Dalman, 1828.....                                                                             | 70    |
| <i>O. occidentalis</i> , Hall, 1847, pl. iv, figs. 2 <i>a</i> and <i>b</i> .....                              | 70-72 |
| <i>O. testudinaria</i> , Dalman (?).....                                                                      | 72    |
| <i>O. plicatella</i> , Hall (?) , 1847, pl. iv, figs. 10 <i>a-d</i> .....                                     | 72-74 |
| <i>O. biforata</i> , Schlotheim, var. <i>lynx.</i> , White, 1875, pl. iv, figs. 9 <i>a</i> and <i>b</i> ..... | 74-75 |
| <i>Rhynchonella</i> , Fischer, 1809.....                                                                      | 75    |
| <i>R. argenturica</i> , White, 1874, pl. iv, figs. 12 <i>a-e</i> .....                                        | 75-76 |
| <i>Conchifera.</i>                                                                                            |       |
| <i>Modiolopsis</i> , Hall, 1847.....                                                                          | 76    |
| <i>M.</i> ——— (?) White, 1875.....                                                                            | 76    |
| <i>Gasteropoda.</i>                                                                                           |       |
| <i>Maclurea</i> , Le Sueur, 1818.....                                                                         | 77    |
| <i>M.</i> ——— (?) White, 1875.....                                                                            | 77    |
| <i>Raphistoma</i> , Hall, 1847.....                                                                           | 77    |
| <i>R. trochiscus</i> , Meek, 1870, pl. iv, figs. 13 <i>a-c</i> .....                                          | 77-78 |
| CARBONIFEROUS AGE.                                                                                            |       |
| SUBCARBONIFEROUS PERIOD.                                                                                      |       |
| <i>Actinozoa.</i>                                                                                             |       |
| <i>Favosites</i> , Lamarek, 1816.....                                                                         | 79    |
| <i>F. divergens</i> , White & Whitfield, 1862, pl. v, fig. 4.....                                             | 79-80 |
| <i>Syringopora</i> , Goldfuss, 1826.....                                                                      | 80    |
| <i>S. harveyi</i> , White (?).....                                                                            | 80    |
| <i>Echinodermata.</i>                                                                                         |       |
| <i>Granatocrinus</i> , Troost, 1850.....                                                                      | 80    |
| <i>G. lotoblastus</i> , White, 1874, pl. v, figs. 3 <i>a</i> and <i>b</i> .....                               | 80-81 |
| <i>Platycrinus</i> , Miller, 1821.....                                                                        | 81    |
| <i>P.</i> ——— (?) White, 1875, pl. v, fig. 2.....                                                             | 81-82 |
| <i>Actinocrinus</i> , Miller, 1821.....                                                                       | 82    |
| <i>A. viaticus</i> , White, 1874, pl. v, fig. 1.....                                                          | 82-83 |
| <i>Brachiopoda.</i>                                                                                           |       |
| <i>Productus</i> , Sowerby, 1812.....                                                                         | 83    |
| <i>P. parvus</i> , M. & W., 1866, pl. v, figs. 6 <i>a</i> and <i>b</i> .....                                  | 83-84 |
| <i>Strophomena</i> , Rafinesque, 1827.....                                                                    | 85    |
| <i>S. rhomboidalis</i> , Wilkins, sp., 1767, pl. v, fig. 5.....                                               | 85-86 |
| <i>Spirifer</i> , Sowerby, 1815.....                                                                          | 86    |
| <i>S. centronatus</i> , Winchell, 1865, pl. v, figs. 8 <i>a-c</i> .....                                       | 86-87 |
| <i>S. striatus</i> , Martin, sp., pl. v, fig. 10 <i>a</i> .....                                               | 88    |
| <i>S. extenuatus</i> , Hall, 1858, pl. v, figs. 9 <i>a-d</i> .....                                            | 88-90 |
| Subgenus <i>Martinia</i> , McCoy, 1844.....                                                                   | 90    |
| <i>S. (Martinia) peculiaris</i> , Shumard, 1855, pl. v, figs. 7 <i>a</i> and <i>b</i> .....                   | 90-91 |
| <i>Spirigera</i> , d'Orbigny, 1847.....                                                                       | 91    |
| <i>S. monticola</i> , White, 1874, pl. v, figs. 11 <i>a-d</i> .....                                           | 91-92 |
| <i>S. obmaxima</i> , McChesney, 1860, pl. v, fig. 12.....                                                     | 92-93 |
| <i>Terebratulæ</i> , Lillwhyd, 1698.....                                                                      | 93    |
| Subgenus <i>Dielasma</i> , King, 1859.....                                                                    | 93    |
| <i>T. (Dielasma) burlingtonensis</i> , White, 1860.....                                                       | 93    |
| <i>Conchifera.</i>                                                                                            |       |
| <i>Conocardium</i> , Brown, 1835.....                                                                         | 94    |
| <i>C.</i> ——— (?) White, 1875.....                                                                            | 94    |
| <i>Gasteropoda.</i>                                                                                           |       |
| <i>Euomphalus</i> , Sowerby, 1815.....                                                                        | 94    |
| <i>E. lusus</i> , n. s., White, 1875, pl. v, figs. 13 <i>a</i> and <i>b</i> .....                             | 94-95 |

CARBONIFEROUS PERIOD.

Protozoa.

Rhizopoda.

|                                                                                   |       |
|-----------------------------------------------------------------------------------|-------|
| <i>Fusulina</i> , Fischer, 1837.....                                              | 96    |
| <i>F. cylindrica</i> , Fischer, 1837, pl. vi, figs. 6 <i>a</i> and <i>b</i> ..... | 96-98 |

Actinozoa.

|                                                                                                            |         |
|------------------------------------------------------------------------------------------------------------|---------|
| <i>Chaetetes</i> , Fischer, 1837.....                                                                      | 98      |
| <i>C. milleporaceus</i> , Troost, sp., 1849 ?, pl. vi, fig. 2 <i>a</i> .....                               | 98-99   |
| <i>Rhombipora</i> , Meek, 1872.....                                                                        | 99      |
| <i>R. lepidodendroides</i> , Meek, 1872, pl. vi, figs. 5 <i>a-d</i> .....                                  | 99-100  |
| <i>Syringopora</i> , Goldfuss, 1826.....                                                                   | 100     |
| <i>S. multattenata</i> , McChesney (?).....                                                                | 100-101 |
| <i>Zaphrentis</i> , Rafinesque & Clifford.....                                                             | 101     |
| <i>Z. excentrica</i> , Meek, 1872, pl. vi, fig. 3 <i>a</i> .....                                           | 101     |
| <i>Lophophyllum</i> , Edwards & Haine, 1850.....                                                           | 101     |
| <i>L. proliferum</i> , McChesney, sp., var. <i>sauridens</i> , White, 1875, pl. vi, figs. 4 <i>a-d</i> ... | 101-103 |
| <i>Lithostrotion</i> , Fleming, 1828.....                                                                  | 103     |
| <i>L. whitneyi</i> , Meek, 1875, pl. vi, figs. 1 <i>a-c</i> .....                                          | 103     |

Echinodermata.

|                                                                               |         |
|-------------------------------------------------------------------------------|---------|
| <i>Archæocidaris</i> , McCoy, 1844.....                                       | 104     |
| <i>A. ornatus</i> , Newberry, 1861, pl. vi, fig. 7.....                       | 104     |
| <i>A. tridifer</i> , White, 1874, pl. vi, figs. 8 <i>a</i> and <i>b</i> ..... | 104-105 |

Polyzoa.

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Glauconome</i> , Goldfuss, 1826.....                                        | 105     |
| <i>G. nereidis</i> , White, 1874, pl. vii, figs. 5 <i>a-e</i> .....            | 105-107 |
| <i>Synocladia</i> , King, 1849.....                                            | 107     |
| <i>S. biserialis</i> , Swallow, 1858, pl. vii, figs. 3 <i>a-c</i> .....        | 107-108 |
| <i>Polypora</i> , McCoy, 1844.....                                             | 108     |
| <i>P. stragula</i> , White, 1874, pl. vii, figs. 4 <i>a</i> and <i>b</i> ..... | 108-109 |

Brachiopoda.

|                                                                                   |         |
|-----------------------------------------------------------------------------------|---------|
| <i>Productus</i> , Sowerby, 1812.....                                             | 109     |
| <i>P. costatus</i> , Sowerby (?), 1827, pl. viii, figs. 2 <i>a-d</i> .....        | 109-111 |
| <i>P. semireticulatus</i> , Martin, sp., 1809, pl. viii, figs. 1 <i>a-c</i> ..... | 111-113 |
| <i>P. prattenianus</i> , Norwood, 1854, pl. vii, figs. 1 <i>a-c</i> .....         | 113-114 |
| <i>P. punctatus</i> , Martin, sp., 1809, pl. vii, figs. 2 <i>a-c</i> .....        | 114-116 |
| <i>P. nebrascensis</i> , Owen, 1852, pl. viii, figs. 3 <i>a-d</i> .....           | 116-117 |
| <i>P. longispinus</i> , Sowerby, 1814, pl. viii, figs. 5 <i>a-d</i> .....         | 118-119 |
| <i>P. muricatus</i> , Norwood & Pratten, 1854, pl. viii, figs. 4 <i>a-c</i> ..... | 120     |
| <i>P. mexicanus</i> , Shumard (?), 1858, pl. viii, figs. 6 <i>a-c</i> .....       | 120-121 |
| <i>Chonetes</i> , Fischer, 1837.....                                              | 121     |
| <i>C. platynota</i> , White, 1874, pl. ix, figs. 6 <i>a-e</i> .....               | 121-122 |
| <i>C. granulifera</i> , Owen, 1855, pl. ix, figs. 8 <i>a-c</i> .....              | 122-123 |
| <i>C. mesoloba</i> , Norwood & Pratten, 1854, pl. ix, fig. 7 <i>a</i> .....       | 123     |
| <i>Hemiphanites</i> , Pander, 1850.....                                           | 124     |
| <i>H. crinistria</i> , Phillips, sp., pl. x, fig. 9 <i>a</i> .....                | 124-125 |
| <i>Orthis</i> , Dalman, 1828.....                                                 | 125     |
| <i>O. pecosii</i> , Marcou, 1858, pl. ix, figs. 5 <i>a-e</i> .....                | 125-126 |
| <i>Meckella</i> , White & St. John, 1867.....                                     | 126     |
| <i>M. striatocostata</i> , Cox, sp., 1857, pl. ix, figs. 4 <i>a-e</i> .....       | 126-128 |

Rhynchonellida.

|                                                                                                           |         |
|-----------------------------------------------------------------------------------------------------------|---------|
| <i>Rhynchonella</i> , Fischer, 1809.....                                                                  | 128     |
| <i>R. uta</i> , Marcou, sp., 1858, pl. ix, figs. 2 <i>a-c</i> .....                                       | 128-129 |
| <i>R. metallica</i> , White, 1874, pl. x, figs. 10 <i>a-d</i> .....                                       | 129-130 |
| <i>R. wasatchensis</i> , White, 1874, pl. ix, figs. 3 <i>a-d</i> .....                                    | 130-131 |
| <i>R. rockymontana</i> , Marcou, 1858, pl. ix, figs. 1 <i>a-d</i> .....                                   | 131-132 |
| <i>Spirifer</i> , Sowerby, 1815.....                                                                      | 132     |
| <i>S. cameratus</i> , Morton, 1836, pl. x, figs. 1 <i>a-d</i> .....                                       | 132-134 |
| <i>S. striatus</i> , Martin, sp.....                                                                      | 134     |
| <i>S. rockymontanus</i> , Marcou, 1858, pl. xi, figs. 9 <i>a-d</i> .....                                  | 134-135 |
| Subgenus <i>Martinia</i> , McCoy, 1844.....                                                               | 135     |
| <i>S. (Martinia) planoconvexus</i> , Shumard, 1855, pl. x, figs. 3 <i>a-c</i> .....                       | 135-136 |
| <i>S. (Martinia) glaber</i> var. <i>contracta</i> , Meek & Worthen, 1866, pl. x, figs. 2 <i>a-c</i> ..... | 136-138 |
| <i>Spiriferina</i> , d'Orbigny, 1847.....                                                                 | 138     |
| <i>S. kentuckensis</i> , Shumard, 1855, pl. x, figs. 4 <i>a-c</i> .....                                   | 138-139 |
| <i>S. octoplicata</i> , Sowerby, 1827, pl. x, figs. 8 <i>a-c</i> .....                                    | 139-140 |
| <i>Retzia</i> , King, 1850.....                                                                           | 141     |
| <i>R. mormoni</i> , Marcou, 1858, pl. x, figs. 7 <i>a-c</i> .....                                         | 141     |



|                                                                                      | Page.   |
|--------------------------------------------------------------------------------------|---------|
| <i>Spirigera</i> , d'Orbigny, 1847 .....                                             | 141     |
| <i>S. subtilita</i> , Hall, 1852, pl. x, figs. 6 <i>a-c</i> .....                    | 141-143 |
| <i>S. planosulcata</i> , Phillips, sp. 1836, pl. x, figs. 5 <i>a-d</i> .....         | 143-144 |
| <i>Terebratulidæ</i> .                                                               |         |
| <i>Terebratula</i> Llhwyd, 1698 .....                                                | 144     |
| Subgenus <i>Dielasma</i> , King, 1859 .....                                          | 144     |
| <i>T. (Dielasma) bovidens</i> , Morton, 1836, pl. xi, figs. 10 <i>a-c</i> .....      | 144-146 |
| <i>Mollusca vera</i> .                                                               |         |
| <i>Conchifera</i> .                                                                  |         |
| <i>Monomyaria</i> .                                                                  |         |
| <i>Pectinidæ</i> .                                                                   |         |
| <i>Ariculopecten</i> , McCoy, 1852 .....                                             | 146     |
| <i>A. occidentalis</i> , Shumard, 1855, pl. xii, figs. 8 <i>a</i> and <i>b</i> ..... | 146-147 |
| <i>A. coreyanus</i> , White, 1874, pl. xi, figs. 1 <i>a</i> and <i>b</i> .....       | 147-148 |
| <i>A. mccoysi</i> , M. & H., 1864, pl. xi, fig. 2 <i>a</i> .....                     | 149     |
| <i>A. interlineatus</i> , M. & W., 1860, pl. xi, fig. 3 <i>a</i> .....               | 149-150 |
| <i>Pinnidæ</i> .                                                                     |         |
| <i>Pinna</i> , Linnaeus, 1758 .....                                                  | 151     |
| <i>P. peracuta</i> , Shumard (?), pl. xi, fig. 5 <i>a</i> .....                      | 151     |
| <i>Pteriidæ</i> .                                                                    |         |
| <i>Monopteria</i> , M. & W., 1866 .....                                              | 151     |
| <i>M. marian</i> , White, 1874, pl. xi, figs. 4 <i>a-c</i> .....                     | 151-152 |
| <i>Myalina</i> , de Koninek, 1844 .....                                              | 152     |
| <i>Myalina</i> (?), White, 1875 .....                                                | 152     |
| <i>M. ? swallori</i> , McClesney, pl. xi, fig. 8 <i>a</i> .....                      | 152     |
| <i>Bakevellia</i> , King, 1848 .....                                                 | 153     |
| <i>B. parva</i> , M. & H., 1858, pl. xi, figs. 7 <i>a</i> and <i>b</i> .....         | 153     |
| <i>Dymyaria</i> .                                                                    |         |
| <i>Trigonidæ</i> .                                                                   |         |
| <i>Schizodus</i> , King, 1844 .....                                                  | 154     |
| <i>S. wheeleri</i> , Swallow, 1862, pl. xi, figs. 6 <i>a</i> and <i>b</i> .....      | 154     |
| <i>Allorisma</i> , King, 1850 .....                                                  | 155     |
| <i>A. subcuneata</i> , var. M. & H., pl. xii, figs. 7 <i>a</i> and <i>b</i> .....    | 155     |
| <i>Gasteropoda</i> .                                                                 |         |
| <i>Prosopcephala</i> .                                                               |         |
| <i>Solenocoacha</i> .                                                                |         |
| <i>Dentaliidæ</i> .                                                                  |         |
| <i>Dentalium</i> , Linnaeus, 1740 .....                                              | 156     |
| <i>D. canna</i> , White, 1874, pl. xii, figs. 6 <i>a</i> and <i>b</i> .....          | 156     |
| <i>Diæca</i> .                                                                       |         |
| <i>Rhiphidoglossa</i> .                                                              |         |
| <i>Dicranobanchia</i> .                                                              |         |
| <i>Bellerophontidæ</i> .                                                             |         |
| <i>Bellerophon</i> , Montfort, 1808 .....                                            | 157     |
| <i>B. crassus</i> , M. & W., 1860, pl. xii, fig. 1 <i>a</i> .....                    | 157     |
| <i>Podophthalma</i> .                                                                |         |
| <i>Euomphalidæ</i> .                                                                 |         |
| <i>Euomphalus</i> , Sowerby, 1815 .....                                              | 158     |
| <i>E. pernodosus</i> , M. & W., 1870, pl. xii, figs. 2 <i>a</i> and <i>b</i> .....   | 158     |
| <i>Pectinibranchiata</i> .                                                           |         |
| <i>Tænioglossa</i> .                                                                 |         |
| <i>Naticidæ</i> .                                                                    |         |
| <i>Naticopsis</i> , McCoy, 1844 .....                                                | 159     |
| <i>N. nana</i> , M. & W., 1866, pl. xii, figs. 4 <i>a</i> and <i>b</i> .....         | 159     |
| <i>Capulidæ</i> .                                                                    |         |
| <i>Platyceras</i> , Conrad, 1840 .....                                               | 159     |
| <i>P. nebrascense</i> , Meek, 1872, pl. xii, figs. 5 <i>a-d</i> .....                | 159-160 |
| <i>Macrocheilidæ</i> .                                                               |         |
| <i>Macrocheilus</i> , Phillips, 1841 .....                                           | 160     |
| <i>M. anguliferus</i> , White, 1874, pl. xii, figs. 3 <i>a-f</i> .....               | 160-161 |
| <i>Cephalopoda</i> .                                                                 |         |
| <i>Tetrabranchiata</i> .                                                             |         |
| <i>Goniatiidæ</i> .                                                                  |         |
| <i>Goniatites</i> , de Haan, 1825 .....                                              | 161     |
| <i>Nautilidæ</i> .                                                                   |         |
| <i>Nautilus</i> , Breyneius, 1732 .....                                              | 161     |

MESOZOIC AGE.

JURASSIC PERIOD.

Radiata.

Echinodermata.

Crinoidea.

Pentacrinidae.

*Pentacrinus*, Miller, 1821 ..... 162

*P. asteriscus*, M. & H., 1864, pl. xiii, figs. 6 *a, b* ..... 162-163

Mollusca.

Conchifera.

Monomyaria.

Ostreidae.

*Ostrea*, Linnæus, 1758 ..... 163

*O. strigilecula*, n. s., White, 1875, pl. xiii, figs. 3 *a-d* ..... 163-164

Pectinidae.

*Camptonectes*, Meek (Agassiz), 1864 ..... 164

*C. stygius*, White, 1874, pl. xiii, figs. 2 *a-c* ..... 164-165

*C. bellistriatus*, M. & H. .... 165

Pteridae.

*Inoceramus*, Sowerby, 1814 ..... 166

*I. crassulatus*, n. s., White, 1875, pl. xiii, figs. 4 *a-e* ..... 166

Dimyaria.

Trigoniidae.

*Myophoria*, Brown, 1830.

*M. ambilineata*, n. s., White, 1875, pl. xiii, figs. 5 *a* and *b* ..... 166-167

*Trigonia*, Bruguière, 1789 ..... 167

*T.* ——— (?), White, 1875 ..... 167

Gastropoda.

Diæa.

Rhipidoglossa.

Podophthalma.

Neritidae.

*Neritina*, Lamarck, 1809 ..... 167

*N. ? phascolaris*, White, 1874, pl. xiii, figs. 1 *a-e* ..... 167-168

CRETACEOUS PERIOD.

Mollusca.

Molluscoidea.

Brachiopoda.

Lyopomata.

Lingulidae.

*Lingula*, Bruguière, 1792 ..... 169

*L. subspatulata*, H. & M., 1856, pl. xv, fig. 4 *a* ..... 169

Mollusca vera.

Conchifera.

Monomyaria.

Ostreidae.

*Ostrea*, Linnæus, 1[7]58 ..... 170

*O. cortex*, Conrad, 1857, pl. xv, figs. 2 *a-c* ..... 170

*O. prudentia*, n. s., White, 1875, pl. xiv, figs. 2 *a-d* ..... 171

*Gryphea*, Lamarck, 1801 ..... 171

*G. piteheri*, var. Morton, pl. xvii, figs. 1 *a-f* ..... 171-172

*Exogyra*, Say, 1819 ..... 172

*E. ponderosa*, Rømer, 1852, pl. xiv, figs. 1 *a-c* ..... 172-173

*E. læviuscula*, Rømer, 1852, pl. xvii, figs. 2 *a-d* ..... 173-174

*E. costata*, Say, var. *fluminis*, White, 1875, pl. xvii, figs. 3 *a-d* ..... 174-175

Pectinidae.

*Camptonectes*, Meek (Agassiz), 1864 ..... 176

*C. platessa*, White, 1874, pl. xvii, fig. 5 *a* ..... 176

Limidae.

*Lima*, Bruguière, 1791 ..... 176

*L. wacoensis*, Rømer, 1852, pl. xvii, figs. 4 *a-c* ..... 176-177

Pteriidae.

*Inoceramus*, Sowerby, 1814 ..... 177

*I. problematicus*, Schlotheim sp., 1820, pl. xvi, fig. 3 *a* ..... 177-178

*I. fragilis*, Hall & Meek, 1856, pl. xv, fig. 3 *a* ..... 178

|                                                                                              | Page.   |
|----------------------------------------------------------------------------------------------|---------|
| <i>I. flaccidus</i> , n. s., White, 1875, pl. xvi, figs. 1 <i>a</i> and <i>b</i> .....       | 178-179 |
| <i>I. deformis</i> , Meek, 1872, pl. xv, figs. 1 <i>a</i> and <i>b</i> .....                 | 179-180 |
| <i>I. barabini</i> , Morton, 1834, pl. xvi, fig. 4 <i>a</i> .....                            | 180-181 |
| <i>I. dimidius</i> , White, 1874, pl. xvi, figs. 2 <i>a-d</i> .....                          | 181-182 |
| <i>Pinnidae.</i>                                                                             |         |
| <i>Pinna</i> , Linnaeus, 1758 .....                                                          | 182     |
| <i>P. petrina</i> , White, 1874, pl. xiii, figs. 7 <i>a</i> and <i>b</i> .....               | 182-183 |
| <i>Dymyaria.</i>                                                                             |         |
| <i>Arcidae.</i>                                                                              |         |
| <i>Idonearca</i> , Conrad, 1862 .....                                                        | 183     |
| <i>I. depressa</i> , n. s., White, 1875, pl. xviii, figs. 13 <i>a</i> and <i>b</i> .....     | 183-184 |
| <i>Lucinidae.</i>                                                                            |         |
| <i>Lucina</i> , Bruguière, 1792 .....                                                        | 184     |
| <i>L. subundata</i> , Hall & Meek, 1856, pl. xviii, fig. 12 <i>a</i> .....                   | 184     |
| <i>Glossidae.</i>                                                                            |         |
| <i>Veniella</i> , Stoliczka, 1870 .....                                                      | 185     |
| <i>V. goniophora</i> , Meek, 1875 .....                                                      | 185     |
| <i>Mactridae.</i>                                                                            |         |
| <i>Mactra</i> , Linnaeus .....                                                               | 185     |
| <i>M. ? incompta</i> , n. s., White, 1875, pl. xvii, fig. 6 <i>a</i> and <i>b</i> .....      | 185     |
| <i>Anatinidae.</i>                                                                           |         |
| <i>Leiopistha</i> , Meek, 1864 .....                                                         | 186     |
| Subgenus <i>Psilomya</i> , Meek, MSS., 1874 .....                                            | 186     |
| <i>L. (Psilomya) meeki</i> , White, 1874, pl. xviii, figs. 14 <i>a-d</i> .....               | 186-187 |
| Subgenus <i>Cymella</i> , Meek, 1864 .....                                                   | 187     |
| <i>L. (Cymella) undata</i> , M. & H., sp., 1856, pl. xviii, fig. 15 <i>a</i> .....           | 187     |
| <i>Corbulidae.</i>                                                                           |         |
| <i>Corbula</i> , Bruguière, 1792 .....                                                       | 188     |
| <i>C. nematophora</i> , Meek, 1872, pl. xvii, figs. 7 <i>a-c</i> .....                       | 188-189 |
| <i>Gasteropoda.</i>                                                                          |         |
| <i>Diacea.</i>                                                                               |         |
| <i>Rhipidoglossa.</i>                                                                        |         |
| <i>Neritidae.</i>                                                                            |         |
| <i>Neritina</i> , Lamarck, 1809 .....                                                        | 189     |
| Subgenus ( <i>Velatella</i> ) Meek, 1872 .....                                               | 189     |
| <i>N. (Velatella) carditoides</i> , Meek, 1872, pl. xviii, figs. 7 <i>a-c</i> .....          | 189-190 |
| <i>Pectinibranchiata.</i>                                                                    |         |
| <i>Tænioglossa.</i>                                                                          |         |
| <i>Aporrhaidae.</i>                                                                          |         |
| <i>Anchura</i> , Conrad, 1860 .....                                                          | 190     |
| <i>A. ? fusiformis</i> , Meek, MSS., 1874, pl. xviii, fig. 4 <i>a</i> .....                  | 190-191 |
| <i>Lispodesthes</i> , n. g., White, 1875 .....                                               | 191     |
| <i>L. nuptialis</i> , White, 1874, pl. xviii, figs. 3 <i>a</i> and <i>b</i> .....            | 192     |
| <i>L. lingulifera</i> , n. s., White, 1875, pl. xviii, figs. 2 <i>a</i> and <i>b</i> .....   | 192-193 |
| <i>Tecturidae.</i>                                                                           |         |
| <i>Anisomya</i> , M. & H., 1860 .....                                                        | 193     |
| <i>A. borealis</i> , Morton, sp., 1842, pl. xviii, figs. 9 <i>a</i> and <i>b</i> .....       | 193-194 |
| <i>A. centrale</i> , Meek, 1870, pl. xviii, figs. 8 <i>a</i> and <i>b</i> .....              | 194-195 |
| <i>Turritellidae.</i>                                                                        |         |
| <i>Turritella</i> , Lamarck, 1801 .....                                                      | 195     |
| <i>T. wasana</i> , Conrad, 1856, pl. xviii, figs. 11 <i>a</i> and <i>b</i> .....             | 195     |
| <i>Cassiope</i> , Coquand, 1865 .....                                                        | 196     |
| <i>C. whitjieldi</i> , White, 1874, pl. xviii, fig. 1 <i>a</i> .....                         | 196     |
| <i>Eulimella</i> , Forbes, 1846 .....                                                        | 197     |
| <i>E. funicula</i> , Meek, 1872, pl. xviii, fig. 6 <i>a</i> .....                            | 197     |
| <i>Pyramidellidae.</i>                                                                       |         |
| <i>Turbonilla</i> , Leach, 1825 .....                                                        | 197     |
| Subgenus <i>Cheumnitzia</i> , Conrad, 1860 .....                                             | 197     |
| <i>T. (Cheumnitzia) melanopsis</i> , Conrad? pl. xviii, fig. 10 <i>a</i> .....               | 197-198 |
| <i>Toxoglossa.</i>                                                                           |         |
| <i>Admetidae.</i>                                                                            |         |
| <i>Admete</i> , Möller, 1842 .....                                                           | 198     |
| Subgenus <i>Admetopsis</i> , Meek, 1872 .....                                                | 198     |
| <i>A. (Admetopsis) gregaria</i> , Meek, 1872, pl. xviii, figs. 5 <i>a</i> and <i>b</i> ..... | 198-199 |

*Cephalopoda.*

*Tetrabranchiata.*

*Baculitidæ.*

|                                                                              |         |
|------------------------------------------------------------------------------|---------|
| <i>Baculites</i> , Lamarek, 1801 .....                                       | 199     |
| <i>B. ovatus</i> , Say, pl. xix, figs. 4 <i>a-c</i> , and 5 <i>a-c</i> ..... | 199-200 |

*Scaphitidæ.*

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Scaphites</i> , Parkinson, 1811.....                           | 200     |
| <i>S. warreni</i> , M. & H., 1860, pl. xix, fig. 3 <i>a</i> ..... | 200-201 |

*Ammonitidæ.*

|                                                                                       |         |
|---------------------------------------------------------------------------------------|---------|
| <i>Ammonites</i> , Bruguière, 1789.....                                               | 201     |
| <i>A. lærianus</i> , n. s., White, 1875, pl. xix, figs. 1 <i>a</i> and <i>b</i> ..... | 201-202 |
| <i>A. placenta</i> , DeKay, var. <i>intercalaris</i> M. & H.....                      | 202     |
| <i>Buchiceras</i> , Hyatt, 1875.....                                                  | 202     |
| <i>B. swallovi</i> , Shumard, 1860, pl. xx, figs. 1 <i>a-c</i> .....                  | 202-203 |

*Turritidæ.*

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| <i>Helicoceras</i> , d'Orbigny, 1842 .....                                 | 203     |
| <i>H. pariense</i> , n. s., White, 1875, pl. xix, figs. 2 <i>a-d</i> ..... | 203-204 |

*Articulata.*

*Vermeæ.*

*Tubicola.*

*Serpulidæ.*

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| <i>Serpula</i> , Linnaeus, 1758 .....                                   | 205 |
| <i>S. intricata</i> , n. s., White, 1875, pl. xv, fig. 5 <i>a</i> ..... | 205 |

CENOZOIC AGE.

TERTIARY PERIOD.

*Mollusca.*

*Conchifera.*

*Dimyaria.*

*Unionidæ.*

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| <i>Unio</i> , Retzius, 1788 .....                                   | 206     |
| <i>U. vetustus</i> , Meek, 1860, pl. xxi, figs. 12 <i>a-d</i> ..... | 206-207 |

*Cyrenidæ.*

|                                                                                            |         |
|--------------------------------------------------------------------------------------------|---------|
| <i>Cyrena</i> , Lamarek, 1818.....                                                         | 207     |
| Subgenus <i>Veloritina</i> , Meek, 1872 .....                                              | 207     |
| <i>C. (Veloritina) durkeei</i> , Meek, 1870, pl. xxi, figs. 13 <i>a</i> and <i>b</i> ..... | 207-208 |
| <i>Sphærium</i> , Scopoli, 1777 .....                                                      | 208     |
| <i>Sphærium</i> — (?), White, 1875.....                                                    | 208     |

*Gastropoda.*

*Pulmonifera.*

*Basommatophora.*

*Limnæidæ.*

|                                                                  |     |
|------------------------------------------------------------------|-----|
| <i>Planorbis</i> , Guettard, 1756 .....                          | 209 |
| <i>P. utahensis</i> , Meek, 1860, pl. xxi, fig. 8 <i>a</i> ..... | 209 |
| <i>Planorbis</i> — (?), White, 1875 .....                        | 210 |

*Physidæ.*

|                                                                                         |     |
|-----------------------------------------------------------------------------------------|-----|
| <i>Physa</i> , Draparnaud, 1801 .....                                                   | 210 |
| <i>P. bridgerensis</i> , Meek? 1872, pl. xxi, fig. 2 <i>a</i> .....                     | 210 |
| <i>P. pleromatis</i> , n. s., White, 1875, pl. xxi, figs. 1 <i>a</i> and <i>b</i> ..... | 211 |

*Geophila.*

*Helicidæ.*

|                                                                     |     |
|---------------------------------------------------------------------|-----|
| <i>Helix</i> , Linnaeus, 1758 .....                                 | 211 |
| <i>H. leidyi</i> , H. & M., 1856, pl. xxi, figs. 3 <i>a-c</i> ..... | 211 |

*Diœca.*

*Pectinibranchiata.*

*Teniolglossa.*

*Melanidæ.*

|                                                                                        |         |
|----------------------------------------------------------------------------------------|---------|
| <i>Goniobasis</i> , Lea, 1862 .....                                                    | 212     |
| <i>G. tenuicarinata</i> , M. & H., 1857, pl. xxi, figs. 10 <i>a</i> and <i>b</i> ..... | 212     |
| <i>G. tenera</i> , Hall, sp., 1845, pl. xxi, figs. 11 <i>a-c</i> .....                 | 212-213 |
| <i>G. nebrascensis</i> , M. & H., 1856, pl. xxi, figs. 9 <i>a-c</i> .....              | 213-214 |

*Viviparidæ.*

|                                                                                         |         |
|-----------------------------------------------------------------------------------------|---------|
| <i>Viviparus</i> , Montfort, 1810 .....                                                 | 214     |
| <i>V. trochiformis</i> , M. & H., 1856, pl. xxi, figs. 4 <i>a-c</i> .....               | 214     |
| <i>V. trochiformis</i> , var. White, 1875, pl. xxi, figs. 5 <i>a</i> and <i>b</i> ..... | 214-215 |



|                                                                                      | Page. |
|--------------------------------------------------------------------------------------|-------|
| <i>V. ionicus</i> , n. s., White, 1875, pl. xxi, figs. 6 <i>a</i> and <i>b</i> ..... | 215   |
| <i>Viviparus</i> — (?) , White, 1875, pl. xxi, figs. 7 <i>a</i> and <i>b</i> .....   | 215   |
| <i>Articulata.</i>                                                                   |       |
| <i>Crustacea.</i>                                                                    |       |
| <i>Ostracoda.</i>                                                                    |       |
| <i>Cypridinidae.</i>                                                                 |       |
| <i>Cypris</i> , Müller, 1785.....                                                    | 216   |
| <i>Cypris</i> — (?) , White, 1875 .....                                              | 216   |

## 49.

WHITE, C. A. Invertebrate Paleontology of the Plateau Province, together with notice of a few species from localities beyond its limits in Colorado. <United States Geological and Geographical Survey of the Territories: Report on the Geology of the Uintah Mountains. By J. W. Powell. 4to, pp. 74-135. Washington, 1876.

Same. Washington, 1876. 4to, pp. 74-135. Fifty separates printed without title-page, covers, or repaging.

This memoir embraces some general geological discussions, catalogues of fossils, and descriptions of 48 new species.

In subsequent works the author has referred to the Laramie group some of the fossils herein assigned, respectively, to the Cretaceous and Tertiary. Most of the species have since been illustrated by the author in various works.

General observations, pp. 75-87.

Catalogue of the fossils collected by the various parties in the field during the years 1868 to 1875, inclusive, pp. 88-107.

Descriptions of new species of Invertebrate fossils from strata of the Carboniferous, Jurassic, Cretaceous, and Tertiary Periods, pp. 107-135.

## CARBONIFEROUS PERIOD.

|                                                     |         |
|-----------------------------------------------------|---------|
| <i>Radiata.</i>                                     |         |
| <i>Actinozoa.</i>                                   | Page.   |
| <i>Amplexus</i> , Sowerby .....                     | 107     |
| <i>A. zaphrentiformis</i> , n. s., White, 1876..... | 107-108 |
| <i>Echinodermata.</i>                               |         |
| <i>Eupachyerinus</i> , M. & W. ....                 | 108     |
| <i>E. platybasis</i> , n. s., White, 1876.....      | 108     |
| <i>Archaeocidaris</i> , McCoy .....                 | 109     |
| <i>A. cratis</i> , n. s., White, 1876 .....         | 109     |
| <i>Mollusca.</i>                                    |         |
| <i>Gasteropoda.</i>                                 |         |
| <i>Naticopsis</i> , McCoy .....                     | 109     |
| <i>N. remer</i> , n. s., White, 1876 .....          | 109     |

## JURASSIC PERIOD.

|                                                |         |
|------------------------------------------------|---------|
| <i>Mollusca.</i>                               |         |
| <i>Conchifera.</i>                             |         |
| <i>Unio</i> , Retzius.....                     | 110     |
| <i>U. stewardi</i> , n. s., White, 1876.....   | 110     |
| <i>Gasteropoda.</i>                            |         |
| <i>Neritina</i> , Lamarek .....                | 110     |
| <i>N. ?? powelli</i> , n. s., White, 1876..... | 110-111 |

## CRETACEOUS PERIOD.

|                                                             |         |
|-------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                            |         |
| <i>Conchifera.</i>                                          |         |
| <i>Ostrea</i> , Linnaeus .....                              | 112     |
| Subgenus <i>Alectryonia</i> , Fischer .....                 | 112     |
| <i>O. (Alectryonia) sannionis</i> , n. s., White, 1876..... | 112     |
| <i>O. insecurea</i> , n. s., White, 1876 .....              | 112-113 |
| <i>Plicatula</i> , Lamarek .....                            | 113     |
| <i>P. hydrotheca</i> , n. s., White, 1876 .....             | 113     |
| <i>Inoceramus</i> , Sowerby .....                           | 113     |
| <i>I. gilberti</i> , n. s., White, 1876.....                | 113-114 |
| <i>I. howelli</i> , n. s., White, 1876 .....                | 114-115 |
| <i>Avicula</i> , Klein .....                                | 115     |
| <i>A. parkensis</i> , n. s., White, 1876 .....              | 115     |

|                                                                | Page.   |
|----------------------------------------------------------------|---------|
| <i>Arca</i> , Linnæus.....                                     | 115     |
| <i>A. ? coalvillensis</i> , n. s., White, 1876.....            | 115-116 |
| <i>Unio</i> , Retzius.....                                     | 116     |
| <i>U. gonionotus</i> , n. s., White, 1876.....                 | 116-117 |
| <i>Cyrena</i> , Lamarck.....                                   | 117     |
| Subgenus <i>Veloritina</i> , Meek.....                         | 117     |
| <i>O. (Veloritina) erecta</i> , n. s., White, 1876.....        | 117     |
| <i>Turnus</i> , Gabb.....                                      | 117     |
| <i>T. sphenoides</i> , n. s., White, 1876.....                 | 117-118 |
| <i>Gasteropoda</i> .                                           |         |
| <i>Rhytrophorus</i> , Meek.....                                | 118     |
| <i>R. meekii</i> , n. s., White, 1876.....                     | 118-119 |
| <i>Planorbis</i> , Guettard.....                               | 119     |
| Subgenus <i>Bathyomphalus</i> , Agassiz.....                   | 119     |
| <i>P. (Bathyomphalus) kanabensis</i> , n. s., White, 1876..... | 119     |
| <i>Physa</i> , Draparnaud.....                                 | 119     |
| <i>P. kanabensis</i> , n. s., White, 1876.....                 | 119     |
| <i>Helix</i> , Linnæus.....                                    | 120     |
| <i>H. kanabensis</i> , n. s., White, 1876.....                 | 120     |
| <i>Anclaura</i> , Conrad.....                                  | 120     |
| <i>A. ruida</i> , n. s., White, 1876.....                      | 120-121 |
| <i>A. prolabiata</i> , n. s., White, 1876.....                 | 121-122 |
| <i>Lunatia</i> , Gray.....                                     | 122     |
| <i>L. utahensis</i> , n. s., White, 1876.....                  | 122     |
| <i>Goniobasis</i> , Lea.....                                   | 122     |
| <i>G. cleburni</i> , n. s., White, 1876.....                   | 122-123 |
| <i>G. chrysaloidea</i> , n. s., White, 1876.....               | 123     |
| <i>Viviparus</i> , Montfort.....                               | 123     |
| <i>V. panguit-chensis</i> , n. s., White, 1876.....            | 123-124 |
| <i>Odontobasis</i> , Meek.....                                 | 124     |
| <i>O. buccinoidea</i> , n. s., White, 1876.....                | 124     |

TERTIARY PERIOD.

Mollusca.

Onchifera.

|                                                    |         |
|----------------------------------------------------|---------|
| <i>Unio</i> , Retzius.....                         | 125     |
| <i>U. petrinus</i> , n. s., White, 1876.....       | 125     |
| <i>U. propheticus</i> , n. s., White, 1876.....    | 125-126 |
| <i>U. brachyopisthus</i> , n. s., White, 1876..... | 126     |
| <i>U. shoshonensis</i> , n. s., White, 1876.....   | 126-127 |
| <i>Corbicula</i> , Mühlfeldt.....                  | 127     |
| <i>C. powelli</i> , n. s., White, 1876.....        | 127-128 |
| <i>Pisidium</i> , Pfeiffer.....                    | 128     |
| <i>P. saginatum</i> , n. s., White, 1876.....      | 128     |
| <i>Mesodesma</i> , Deshayes.....                   | 128     |
| <i>M. bishopi</i> , n. s., White, 1876.....        | 128     |
| <i>Corbula</i> , Bruguière.....                    | 129     |
| <i>C. subundifera</i> , n. s., White, 1876.....    | 129     |

Gasteropoda.

|                                                  |         |
|--------------------------------------------------|---------|
| <i>Succinea</i> , Draparnaud.....                | 129     |
| <i>S. papillispira</i> , n. s., White, 1876..... | 129-130 |
| <i>Helix</i> , Linnæus.....                      | 130     |
| <i>H. riparia</i> , n. s., White, 1876.....      | 130     |
| <i>H. peripheria</i> , n. s., White, 1876.....   | 130     |
| <i>Pupa</i> , Lamarck.....                       | 130     |
| <i>P. incolata</i> , n. s., White, 1876.....     | 130-131 |
| <i>P. arenula</i> , n. s., White, 1876.....      | 131     |
| <i>Neritina</i> , Lamarck.....                   | 131     |
| <i>N. volvilineata</i> , n. s., White, 1876..... | 131     |
| <i>Melania</i> , Lamarck.....                    | 131     |
| <i>M. larunda</i> , n. s., White, 1876.....      | 131-132 |
| <i>Hydrobia</i> , Hartmann.....                  | 132     |
| <i>H. recta</i> , n. s., White, 1876.....        | 132     |
| <i>H. utahensis</i> , n. s., White, 1876.....    | 132-133 |
| <i>Viviparus</i> , Montfort.....                 | 133     |

|                                                   | Page.   |
|---------------------------------------------------|---------|
| <i>V. plicapressus</i> , n. s., White, 1876 ..... | 133     |
| <i>Leioplax</i> , Troschel .....                  | 133     |
| <i>L. ? turricula</i> , n. s., White, 1876 .....  | 133-134 |
| <i>Tulotoma</i> , Haldeman .....                  | 134     |
| <i>T. thompsoni</i> , n. s., White, 1876 .....    | 134     |
| <i>Phorus</i> , Montfort .....                    | 134     |
| <i>P. exoneratus</i> , n. s., White, 1876 .....   | 134-135 |

## 50.

WHITE, C. A. In Memoriam: Fielding Bradford Meek. <Am. Jour. Sci., 3d ser., vol. xiii, pp. 169-171. New Haven, 1877.

Same. New Haven, 1877. 8vo, 3 pages. One hundred separates printed with half-title and repaging.

A brief sketch of the life and labors of the paleontologist, Mr. Meek.

## 51.

WHITE, C. A. Descriptions of new species of fossils from the Paleozoic rocks of Iowa.

<Proc. Acad. Nat. Sci. Phila., for 1876, vol. xxviii, pp. 27-34. Philadelphia, 1877.

Same. Philadelphia, 1876. 8vo., pp. 27-34. Fifty separates printed without title-page, covers, or repaging.

Thirteen species are described as new, and the genus *Strobilocystites* is proposed.

*Radiata.**Actinozoa.*

|                                                    | Page. |
|----------------------------------------------------|-------|
| <i>Chaetetes</i> , Fischer .....                   | 27    |
| <i>C. muscatinensis</i> , n. s., White, 1877 ..... | 27    |
| <i>Monticulipora</i> , d'Orbigny .....             | 27    |
| <i>M. monticula</i> , n. s., White, 1877 .....     | 27    |
| <i>Lophophyllum</i> , E. & H., 1877 .....          | 27    |
| <i>L. expansum</i> , n. s., White, 1877 .....      | 27-28 |

*Echinodermata.*

|                                                    |       |
|----------------------------------------------------|-------|
| <i>Strobilocystites</i> , n. g., White, 1877 ..... | 28    |
| <i>S. calvini</i> , n. s., White, 1877 .....       | 28-29 |
| <i>Megistocrinus</i> , Owen .....                  | 29    |
| <i>M. farnsworthi</i> , n. s., White, 1877 .....   | 29-30 |

*Mollusca.**Brachiopoda.*

|                                                 |    |
|-------------------------------------------------|----|
| <i>Stricklandinia</i> , Billings .....          | 30 |
| <i>S. castellana</i> , n. s., White, 1877 ..... | 30 |

*Conchifera.*

|                                                  |       |
|--------------------------------------------------|-------|
| <i>Paracyclas</i> , Hall .....                   | 31    |
| <i>P. sabini</i> , n. s., White, 1877 .....      | 31    |
| <i>Allorisma</i> , King .....                    | 31    |
| <i>A. marionensis</i> , n. s., White, 1877 ..... | 31-32 |

*Gasteropoda.*

|                                                   |       |
|---------------------------------------------------|-------|
| <i>Bellerophon</i> , Montfort .....               | 32    |
| <i>B. bowmani</i> , n. s., White, 1877 .....      | 32    |
| <i>Eumphalus</i> , Sowerby .....                  | 32    |
| <i>E. springuensis</i> , n. s., White, 1877 ..... | 32-33 |

*Pteropoda.*

|                                              |    |
|----------------------------------------------|----|
| <i>Conularia</i> , Miller .....              | 33 |
| <i>C. molaris</i> , n. s., White, 1877 ..... | 33 |

*Cephalopoda.*

|                                              |       |
|----------------------------------------------|-------|
| <i>Cyrtoceras</i> , Goldfuss .....           | 33    |
| <i>C. dictyum</i> , n. s., White, 1877 ..... | 33-34 |

*Articulata.**Vermes.*

|                                            |    |
|--------------------------------------------|----|
| <i>Tentaculites</i> , Schlotheim .....     | 34 |
| <i>T. hoyti</i> , n. s., White, 1877 ..... | 34 |

52.

WHITE, C. A. Paleontological papers, No. 1: Descriptions of Unionidæ and Physidæ, collected by Prof. E. D. Cope, from the Judith River Group of Montana, during the summer of 1876. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xx, pp. 599-602. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 599-602. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 2, 3, 4, and 5.

Six species are described as new. This is the first of a series of short unillustrated articles which reached eleven in number, and then ceased with the suspension of the survey in charge of Dr. Hayden. This form of title has not since been used by the author.

Page.

*Unionidæ.*

|                                                      |         |
|------------------------------------------------------|---------|
| <i>Unio primævus</i> , n. s., White, 1877.....       | 599-600 |
| <i>Unio cryptorhynchus</i> , n. s., White, 1877..... | 600     |
| <i>Unio senectus</i> , n. s., White, 1877.....       | 600-601 |
| <i>Anodonta propatoris</i> , n. s., White, 1877..... | 601     |

*Physidæ.*

|                                                 |         |
|-------------------------------------------------|---------|
| <i>Bulinus atarus</i> , n. s., White, 1877..... | 601-602 |
| <i>Physa copei</i> , n. s., White, 1877.....    | 602     |

53.

WHITE, C. A. Paleontological Papers No. 2: Descriptions of new species of Uniones, and a new genus of fresh-water Gasteropoda from the Tertiary strata of Wyoming and Utah. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxi, pp. 603-606. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 603-606. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 3, 4, and 5.

Four species are described as new, two preoccupied names changed, and the genus *Cassio-pella* proposed.

Page.

*Unionidæ.*

|                                                 |         |
|-------------------------------------------------|---------|
| <i>Unio proacutus</i> , n. s., White, 1877..... | 603-604 |
| <i>U. holmesianus</i> , n. s., White, 1877..... | 604     |
| <i>U. endlichii</i> , n. s., White, 1877.....   | 604-605 |
| <i>U. couesi</i> , [n. s.,] White, 1877.....    | 605     |
| <i>U. meeki</i> , [n. s.,] White, 1877.....     | 605     |
| <i>U. mendax</i> , n. s., White, 1877.....      | 605-606 |

*Ceriphasiidae.*

|                                              |     |
|----------------------------------------------|-----|
| <i>Cassiopella</i> , n. g., White, 1877..... | 606 |
|----------------------------------------------|-----|

54.

WHITE, C. A. Paleontological Papers No. 3: Catalogue of the Invertebrate Fossils, hitherto published from the fresh- and brackish-water deposits of the western portion of North America. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxii, pp. 607-614. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 607-614. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 4, and 5.

This paper contains a list of the fossil non-marine invertebrate forms at that time known. They have since been much increased. (See entry No. 115.)

The author has somewhat modified certain views expressed in this paper. These later views are published in entry No. 115.



## 55.

WHITE, C. A. Paleontological Papers No. 4: Comparison of the North American Mesozoic and Cenozoic Unionidæ and associated mollusks with living species. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxiii, pp. 615-624. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 615-624. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 3, and 5.

The relations of the living Uniones of the Mississippi River system with the fossil forms from western North America are pointed out.

## 56.

WHITE, C. A. Paleontological Papers No. 5: Remarks on the Paleontological characteristics of the Cenozoic and Mesozoic groups as developed in the Green River region. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iii, art. xxiv, pp. 625-629. Washington, 1877.

Same. Washington: Government Printing Office, 1877. 8vo, pp. 625-629. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers Nos. 1, 2, 3, and 4.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 721-724. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 6.

## 57.

WHITE, C. A. Circulation of the Blood, subjectively seen. <Am. Journ. of the Med. Sci., vol. lxxiii, n. s., p. 279. Philadelphia, 1877.

The appearance of multitudes of rapidly moving corpuscles to be observed when the eyes are shut, especially when there is more or less cerebral excitement, the author conceives to be due to the impact of the blood corpuscles behind the layer of rods and cones.

## 58.

WHITE, C. A. Paleontological Papers No. 6: Descriptions of new species of Invertebrate fossils from the Laramie Group. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. iv, art. xxviii, pp. 707-719. Washington, 1878.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 707-719. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 7.

Nineteen species of mollusks are described as new.

*Conchifera.*

|                                                                 | Page.   |
|-----------------------------------------------------------------|---------|
| <i>Volsella</i> , Scopoli .....                                 | 707     |
| Subgenus <i>Brachydontes</i> , Swainson .....                   | 707     |
| <i>V. (Brachydontes) regularis</i> , n. s., White, 1877 .....   | 707-708 |
| <i>V. (Brachydontes) laticostata</i> , n. s., White, 1877 ..... | 708     |
| <i>Nuculana</i> , Link .....                                    | 708     |
| <i>N. inclara</i> , n. s., White, 1877 .....                    | 708-709 |
| <i>Anodonta</i> , Cuvier .....                                  | 709     |
| <i>A. parallela</i> , n. s., White, 1877 .....                  | 709     |
| <i>Unio</i> , Retzius .....                                     | 709     |
| <i>U. goniambonatus</i> , n. s., White, 1877 .....              | 709-710 |
| <i>U. aldrichi</i> , n. s., White, 1877 .....                   | 710-711 |
| <i>Corbicula</i> , Mergel .....                                 | 711     |
| <i>C. cleburni</i> , n. s., White, 1877 .....                   | 711     |
| <i>C. cardiniaformis</i> , n. s., White, 1877 .....             | 711-712 |
| <i>C. obesa</i> , n. s., White, 1877 .....                      | 712-713 |

|                                                               | Page.   |
|---------------------------------------------------------------|---------|
| Subgenus <i>Leptesthes</i> , Meek .....                       | 713     |
| <i>O. (Leptesthes) macropistha</i> , n. s., White, 1877 ..... | 713     |
| <i>Acella</i> , Haldeman .....                                | 714     |
| <i>A. haldemani</i> , n. s., White, 1877 .....                | 714     |
| <i>Physa</i> , Draparnaud .....                               | 714     |
| <i>P. felix</i> , n. s., White, 1877 .....                    | 714     |
| <i>Helic</i> , Linnaeus .....                                 | 714     |
| <i>H. carstonensis</i> , n. s., White, 1877 .....             | 714     |
| <i>Neritina</i> , Lamarek .....                               | 715     |
| <i>N. naticiformis</i> , n. s., White, 1877 .....             | 715     |
| Subgenus <i>Velatella</i> , Meek .....                        | 715     |
| <i>N. (Velatella) baptista</i> , n. s., White, 1877 .....     | 715-716 |
| <i>Goniobasis</i> , Lea .....                                 | 716     |
| <i>G. endlichi</i> , n. s., White, 1877 .....                 | 716     |
| <i>Viviparus</i> , Lamarek .....                              | 716     |
| <i>V. prudentia</i> , n. s., White, 1877 .....                | 716-717 |
| <i>V. couesi</i> , n. s., White, 1877 .....                   | 717-718 |
| <i>Odontobasis</i> , Meek .....                               | 718     |
| <i>O. ? formosa</i> , n. s., White, 1877 .....                | 718-719 |

59.

WHITE, C. A. Paleontological Papers No. 7: On the distribution of Molluscan species in the Laramie Group. < Bulletin U. S. Geol. and Geog. Surv. of the Terr. vol. iv, art. xxix, pp. 721-724. Washington, 1878.

The unity of the Judith River, Fort Union, Lignitic, and Bitter Creek series, as the Laramie Group is shown in this paper.

60.

WHITE, C. A. Paleontological papers No. 8. Remarks upon the Laramie group. < Bulletin U. S. Geol. and Geogr. Surv. of the Terr., vol. iv, art. xxxvi, pp. 865-876. Washington, 1878.

Same. Washington: Government Printing Office, 1878. 8vo, pp. 865-876. Two hundred separates printed (author's edition), with title-page and paper covers, but without repaging.

The characteristics of the group and its probable geological age are discussed.

61.

WHITE, C. A., and NICHOLSON, H. A. Bibliography of North American Invertebrate Paleontology; being a report upon the publications that have hitherto been made upon the invertebrate paleontology of North America, including the West Indies and Greenland. By C. A. White, M. D., Paleontologist of the United States Geological Survey, and H. Alleyne Nicholson, M. D., D. Sc., Professor at the University of St. Andrews, Scotland. < Department of the Interior; United States Geological Survey of the Territories. Miscellaneous publications No. 10. Washington: Government Printing Office, 1878. 8vo, 132 pp.

CONTENTS.

Part I. Embracing titles and abstracts of publications made in the United States. By C. A. White, M. D. pp. 7-69.

Part II. Embracing titles and abstracts of publications made in British North America, in the West Indies, and Europe. By H. Alleyne Nicholson, M. D., D. Sc., pp. 71-132.

62.

WHITE, C. A. Change in the habits of Toads. < Nature. 4to, vol. xvii, p. 242. London and New York, 1878.

Observations made in Colorado along irrigating ditches show that the toads there have formed, or reverted to, the habit of diving to the bottom, when disturbed, and remaining there like frogs.

## 63.

WHITE, C. A. Note on the Re-establishment of Forests in Iowa, now in progress. <Amer. Jour. Sci., 3d ser., vol. xvi, p. 328. New Haven, 1878.

This note has reference to an article by Prof. Asa Gray in the same volume of the Journal, entitled, Forestry and Archaeology.

## 64.

WHITE, C. A. Report on the Geology of a portion of Northwestern Colorado. <Tenth Annual Report U. S. Geol. and Geogr. Surv. of the Terr. (for the year 1876), pp. 1-60. One map and one plate. Washington, 1878.

The structure of the eastern end of the Uinta Mountain range is shown, and its relation to the Park range of the Rocky Mountain system explained. The isolated up-thrust mountains are described, and the term "partiversal," as applied to dips, is first used in this report. The results of this work, as shown on the accompanying map, were subsequently incorporated in sheets iv and xi of the Atlas of Colorado and Portions of the Adjacent Territory, published in 1877 by the same survey.

## 65.

WHITE, C. A. Note on the Garter Snake. <Amer. Naturalist, vol. xii, p. 53. Philadelphia, 1878.

This note records a supposed instance of the swallowing of a quantity of air by a garter snake immediately before diving to the bottom of a pool of water.

## 66.

WHITE, C. A. Contributions to Invertebrate Paleontology, No. 1: Cretaceous Fossils of the Western States and Territories. <Eleventh Annual Report U. S. Geol. and Geogr. Surv. of the Terr. (for the year 1877), pp. 273-319, pls. i-x. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo, pp. 273-319, pls. i-x. Two hundred separates printed without repaging, but with title-page and paper covers. The title upon the title-page differs from that which heads the text by the omission of the word "Invertebrate."

Fifty-six species are described and figured, a part of which are new, but most of which had been previously described by different authors, without illustrations. This series of "Contributions" was established for the purpose of illustrating species of fossils previously described, as well as new forms. They number eight in all, and that form of title has not been subsequently used by the author in connection with his work for the United States Surveys.

|                                                                                                                                         | Page.   |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Radiata.</i>                                                                                                                         |         |
| <i>Actinaria.</i>                                                                                                                       |         |
| <i>Caryophyllia</i> , Lamarck.                                                                                                          |         |
| <i>O. johannis</i> , n. s., White, 1879, pl. vi, figs. 6 <i>a</i> , <i>b</i> .....                                                      | 274-275 |
| <i>O. egeria</i> , n. s., White, 1879, pl. vi, figs. 7 <i>a</i> , <i>b</i> .....                                                        | 275     |
| <i>Mollusca.</i>                                                                                                                        |         |
| <i>Onchifera.</i>                                                                                                                       |         |
| <i>Ostrea</i> , Linnaeus.....                                                                                                           | 275     |
| <i>O. quadriplicata</i> , Shumard, 1860, pl. v, fig. 6 <i>a</i> , pl. viii, figs. 3 <i>a</i> , <i>b</i> .....                           | 275-276 |
| <i>O. (Alectryonia) bellaplicata</i> , Shumard, 1860, pl. iv, figs. 3 <i>a</i> , <i>b</i> , pl. viii, figs. 2 <i>a</i> , <i>b</i> ..... | 276-277 |
| <i>O. (Alectryonia) sannionis</i> , White, 1876, pl. ii, figs. 2 <i>a-c</i> .....                                                       | 277-278 |
| <i>Exogyra</i> , Say.....                                                                                                               | 278     |
| <i>E. valkeri</i> , n. s., White, 1879, pl. i, figs. 1 <i>a</i> , <i>b</i> .....                                                        | 278     |
| <i>Placunopsis</i> , Morris & Lycett.....                                                                                               | 278     |
| <i>P. hilliardensis</i> , n. s., White, 1879, pl. vii, fig. 14 <i>a</i> .....                                                           | 278-279 |
| <i>Plicatula</i> , Lamarck.....                                                                                                         | 279     |
| <i>P. hydrothea</i> , White, 1876, pl. vi, figs. 3 <i>a</i> , <i>b</i> .....                                                            | 279     |
| <i>Pteria</i> , Scopoli.....                                                                                                            | 279     |
| <i>P. parkensis</i> , White, 1876, pl. iii, fig. 3 <i>a</i> .....                                                                       | 279-280 |
| Subgenus, <i>Oxytoma</i> , Meek.....                                                                                                    | 280     |

|                                                                                                                        | Page.   |
|------------------------------------------------------------------------------------------------------------------------|---------|
| <i>P. (Oxytoma ?) gastroides</i> , Meek, 1873, pl. x, fig. 1 <i>a</i> .....                                            | 280-281 |
| Subgenus <i>Pseudoptera</i> , Meek .....                                                                               | 281     |
| <i>P. (Pseudoptera) propleura</i> , Meek, 1873, pl. x, figs. 2 <i>a-c</i> .....                                        | 281-284 |
| <i>Inoceramus</i> , Sowerby .....                                                                                      | 284     |
| <i>I. howelli</i> , White, 1876, pl. iv, figs. 1 <i>a-c</i> .....                                                      | 284-285 |
| <i>I. gilberti</i> , White, 1876, pl. iii, figs. 1 <i>a-c</i> .....                                                    | 285     |
| <i>I. oblongus</i> , Meek, 1871, pl. ii, figs. 1 <i>a, b</i> .....                                                     | 285-286 |
| <i>Barbatia</i> , Gray .....                                                                                           | 286     |
| <i>B. coalvillensis</i> , White, 1876, pl. vi, figs. 2 <i>a, b</i> .....                                               | 286-287 |
| <i>Crassatella</i> , Lamarek .....                                                                                     | 287     |
| <i>C. cimarronensis</i> , n. s., White, 1879, pl. v, figs. 3 <i>a-c</i> .....                                          | 287-288 |
| <i>Tancredia</i> , Lycett .....                                                                                        | 288     |
| <i>T. ? carlinotus</i> , n. s., White, 1879, pl. v, figs. 2 <i>a-d</i> .....                                           | 288     |
| <i>Cyrena</i> , Lamarek .....                                                                                          | 289     |
| <i>C. securis</i> , Meek, 1873, pl. iii, figs. 2 <i>a-c</i> .....                                                      | 289     |
| <i>C. inflexa</i> , Meek, 1871, pl. x, figs. 7 <i>a, b</i> .....                                                       | 290     |
| <i>Corbula</i> , Bruguière .....                                                                                       | 290     |
| <i>C. nematophora</i> , Meek, 1873, pl. iii, figs. 4 <i>a-d</i> .....                                                  | 290-291 |
| <i>Cardium</i> , Linnaeus .....                                                                                        | 291     |
| <i>O. pauperculum</i> , Meek, 1872, pl. ix, fig. 3 <i>a</i> .....                                                      | 291     |
| <i>C. trite</i> , n. s., White, 1879, pl. v, figs. 4 <i>a, b</i> .....                                                 | 291-292 |
| <i>Cardium</i> — ? , White, 1879, pl. ix, figs. 2 <i>a-c</i> .....                                                     | 292     |
| <i>Trapezium truncatum</i> , Meek, 1871, pl. x, figs. 6 <i>a, b</i> .....                                              | 292-293 |
| <i>Trapezium ? micronema</i> , Meek, 1873, pl. x, figs. 5 <i>a</i> .....                                               | 293     |
| <i>Baroda wyomingensis</i> , Meek, 1871, pl. x, figs. 3 <i>a, b</i> .....                                              | 293-294 |
| <i>Baroda subelliptica</i> , n. s., White, 1879, pl. x, figs. 4 <i>a-d</i> .....                                       | 294-295 |
| <i>Mactra ? holmesii</i> , Meek, 1875, pl. vi, figs. 4 <i>a-c</i> .....                                                | 295-297 |
| <i>Mactra ? cañonensis</i> , Meek, 1871, pl. ix, figs. 11 <i>a-c</i> .....                                             | 297-298 |
| <i>Pachymya</i> , Sowerby .....                                                                                        | 298     |
| <i>P. austinensis</i> , Shumard, pl. viii, figs. 1 <i>a, b</i> , and pl. v, figs. 7 <i>a, b</i> .....                  | 298     |
| <i>P. ? herseyi</i> , n. s., White, 1879, pl. v, figs. 5 <i>a, b</i> .....                                             | 298-299 |
| <i>Glycimeris</i> , Lamarek .....                                                                                      | 299     |
| <i>G. berthoudi</i> , n. s., White, 1879, pl. vi, figs. 1 <i>a, b</i> .....                                            | 299-300 |
| <i>Parapholas</i> , Conrad .....                                                                                       | 300     |
| <i>P. sphenoides</i> , White, 1876, pl. v, figs. 1 <i>a-d</i> .....                                                    | 300-302 |
| <i>Gasteropoda.</i>                                                                                                    |         |
| <i>Paliurus</i> , Gabb .....                                                                                           | 302     |
| <i>P. pentangulatus</i> , n. s., White, 1879, pl. iv, figs. 4 <i>a, b</i> .....                                        | 302-303 |
| <i>Anisomyon</i> , M. & H. ....                                                                                        | 303     |
| <i>A. centrale</i> , Meek, 1872, pl. ix, figs. 1 <i>a-d</i> .....                                                      | 303-304 |
| <i>Acteon</i> , Montfort .....                                                                                         | 304     |
| <i>A. woosteri</i> , n. s., White, 1879, pl. vii, figs. 9 <i>a-c</i> .....                                             | 304     |
| <i>Acteonina</i> , d'Orbigny .....                                                                                     | 305     |
| <i>A. prosoclella</i> , n. s., White, 1879, pl. vii, figs. 10 <i>a, b</i> .....                                        | 305     |
| <i>Turbonilla</i> , Risso .....                                                                                        | 305     |
| <i>T. (Chemnitzia) coalvillensis</i> , Meek, 1873, pl. ix, figs. 5 <i>a, b</i> .....                                   | 305-306 |
| <i>Physa</i> , Draparnaud .....                                                                                        | 306     |
| <i>P. carletoni</i> , Meek, 1873, pl. vii, fig. 12 <i>a</i> .....                                                      | 306-307 |
| <i>Physa</i> — ? , White, 1879, pl. vii, fig. 13 <i>a</i> .....                                                        | 307-308 |
| <i>Neritina</i> , Lamarek .....                                                                                        | 308     |
| <i>N. pisum</i> , Meek, 1873, pl. vii, figs. 11 <i>a-c</i> .....                                                       | 308     |
| <i>N. incompta</i> , White, 1876, pl. vii, figs. 6 <i>a-c</i> .....                                                    | 308-309 |
| <i>N. (Velatella) patelliformis</i> , Meek, 1873, pl. vii, figs. 7 <i>a-d</i> .....                                    | 309     |
| <i>N. (Velatella) patelliformis</i> var. <i>weberensis</i> , White, 1879, pl. vii, figs. 8 <i>a</i> and <i>b</i> ..... | 309-310 |
| <i>Euspira</i> , Agassiz .....                                                                                         | 310     |
| <i>E. coalvillensis</i> , White, 1876, pl. iv, figs. 2 <i>a</i> and <i>b</i> .....                                     | 310     |
| <i>Anchura</i> , Conrad .....                                                                                          | 311     |
| <i>A. haydeni</i> , n. s., White, 1879, pl. vii, fig. 1 <i>a</i> .....                                                 | 311-312 |
| <i>A. (Drepanocheilus) rudiva</i> , White, 1876, pl. vii, figs. 4 <i>a, b</i> .....                                    | 312     |
| <i>A. (Drepanocheilus) mudgeana</i> , n. s., White, 1879, pl. vii, figs. 3 <i>a, b</i> .....                           | 312-313 |
| <i>A. (Drepanocheilus) prolabiata</i> , White, 1876, pl. vii, fig. 2 <i>a</i> .....                                    | 313-314 |
| <i>Turritella</i> , Lamarek .....                                                                                      | 314     |
| <i>T. marnochi</i> , n. s., White, 1879, pl. vii, figs. 5 <i>a, b</i> .....                                            | 314-315 |
| <i>T. coalvillensis</i> , Meek, 1873, pl. ix, fig. 4 <i>a</i> .....                                                    | 315-316 |
| <i>T. (Aclis ?) micronema</i> , Meek, 1873, pl. ix, fig. 8 <i>a</i> .....                                              | 316     |



|                                                                         | Page.   |
|-------------------------------------------------------------------------|---------|
| <i>Eulimella</i> , Forbes.....                                          | 316     |
| <i>E. ? funicula</i> , Meek, 1873, pl. ix, fig. 10 <i>a</i> .....       | 316-317 |
| <i>Fusus</i> , Lamarck.....                                             | 317     |
| <i>F. (Neptunea?) gabbi</i> , Meek, 1873, pl. ix, fig. 9 <i>a</i> ..... | 317     |
| <i>Adinetopsis</i> , Meek.....                                          | 317     |
| <i>A. rhomboides</i> , Meek, 1873, pl. ix, figs. 6 <i>a, b</i> .....    | 317-318 |
| <i>A. subfusiformis</i> , Meek, 1873, pl. ix, fig. 7 <i>a</i> .....     | 318-319 |

## 67.

WHITE, C. A. Descriptions of new species of Invertebrate fossils from the Carboniferous and Upper Silurian rocks of Illinois and Indiana. <Proc. Acad. Nat. Sci., Phila., vol. xxx, pp. 29-37. Philadelphia, 1878.

Same. 8 vo., pp. 29-37. Philadelphia, 1878. Thirty separates printed without title-page, covers, or repaging.

|                                                  | Page. |
|--------------------------------------------------|-------|
| Nine species are described as new.               |       |
| <i>Radiata</i> .                                 |       |
| <i>Actinozoa</i> .                               |       |
| <i>Baryphyllum</i> , Edwards & Haimo.....        | 29    |
| <i>B. fungulus</i> , n. s., White, 1878.....     | 29-30 |
| <i>Echinodermata</i> .                           |       |
| <i>Platyerinus</i> , Miller.....                 | 30    |
| <i>P. bonoensis</i> , n. s., White, 1878.....    | 30-31 |
| <i>Scaphioerinus</i> , Hall.....                 | 31    |
| <i>S. gibsoni</i> , n. s., White, 1878.....      | 31-32 |
| <i>S. gurleyi</i> , n. s., White, 1878.....      | 32-33 |
| <i>Lepidesthes</i> , M. & W.....                 | 33    |
| <i>L. colletti</i> , n. s., White, 1878.....     | 33-34 |
| <i>Mollusca</i> .                                |       |
| <i>Polyzoa</i> .                                 |       |
| <i>Ptilodictia</i> , Lonsdale.....               | 35    |
| <i>P. triangulata</i> , n. s., White, 1878.....  | 35    |
| <i>Conchifera</i> .                              |       |
| <i>Astartella</i> , Hall.....                    | 35    |
| <i>A. gurleyi</i> , n. s., White, 1878.....      | 35-36 |
| <i>Cephalopoda</i> .                             |       |
| <i>Nautilus</i> , Breynius.....                  | 36    |
| <i>N. danvillensis</i> , n. s., White, 1878..... | 36-37 |
| <i>Articulata</i> .                              |       |
| <i>Vermes</i> .                                  |       |
| <i>Serpula</i> , Linnæus.....                    | 37    |
| <i>S. insita</i> , n. s., White, 1878.....       | 37    |

## 68.

WHITE, C. A. Anecdote of the Great Horned Owl. <American Naturalist, vol. xiii, p. 783. Philadelphia, 1879.

This anecdote is told to illustrate the precision, rapidity, and extent of the action of the muscles of the neck of that owl. Its authorship is indicated only by the initials "C. A. W."

## 69.

WHITE, C. A. Remarks on the Jura-Trias of Western North America. <Am. Jour. Sci., vol. xvii, 3d ser., pp. 214-218. New Haven, 1879.

Same. New Haven, 1879. 8vo., pp. 214-218. Twenty separates printed without title-page, covers, or repaging.

Reference is made in this article to the Triassic fossils which are described in Paleontological Papers No. 9.

## 70.

WHITE, C. A. Report on the Paleontological Field-work for the season of 1877. <Eleventh Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1877), pp. 161-272. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo, pp. 161-272. Two hundred separates printed, with title-page and paper covers, but without re-paging.

This report gives results of observations in Colorado, Utah, and Wyoming. The existence of the Green River and Bridger groups south of the Uinta Mountains is first announced in this report; and descriptions of three species of fossils are given in foot-notes.

|                                                                                                                                                             | Page.   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Bulinus disjunctus</i> , n. s., White, 1879.....                                                                                                         | 170     |
| <i>Pinna lakesi</i> , n. s., White, 1879.....                                                                                                               | 181     |
| <i>Corbula dubiosa</i> , n. s., White, 1879.....                                                                                                            | 249     |
| Crow Creek section.....                                                                                                                                     | 164     |
| List of fossils from the valley of Crow Creek, Colorado.....                                                                                                | 165     |
| Notes on the Laramie fossils obtained in the valley of Crow Creek, Colorado.....                                                                            | 165-175 |
| List of the fossils collected from Cretaceous strata in the valley of the Cache à la Poudre, from five to twelve miles west of Greeley, Colo.....           | 175-176 |
| List of Cretaceous fossils collected at Fossil Ridge, three miles southeastward from Spring cañon, and about six miles south of Fort Collins, Colorado..... | 176-177 |
| List of fossils collected in the valley of Little Thompson Creek.....                                                                                       | 177-178 |
| List of the fossils collected at the mouth of Saint Vrain River, Colorado.....                                                                              | 178-179 |
| Notes on the fossils of the Fox Hills group as developed in Colorado, east of the Rocky Mountains.....                                                      | 179-189 |
| Bijou Creek section.....                                                                                                                                    | 189     |
| List of fossils from the valley of Bijou Creek, Colorado.....                                                                                               | 190     |
| Notes on the Laramie fossils collected in the valley of Bijou Creek, Colorado.....                                                                          | 190-197 |
| List of Cretaceous fossils from the vicinity of Golden City and Morrison, Colo.....                                                                         | 197     |
| Notes on the fossils from the vicinity of Golden City and Morrison.....                                                                                     | 179-204 |
| List of Cretaceous fossils collected on Sage Creek, an upper tributary of Yampa River, Colorado.....                                                        | 205     |
| Notes on the Cretaceous fossils of Sage Creek.....                                                                                                          | 205-207 |
| List of Laramie fossils collected in Yampa valley, near Cañon Park, Northwestern Colorado.....                                                              | 207     |
| Notes on the Laramie fossils of Yampa valley.....                                                                                                           | 208-211 |
| List of the Laramie fossils found in the Danforth Hills, Northwestern Colorado.....                                                                         | 211     |
| Notes on the Laramie fossils of Danforth Hills.....                                                                                                         | 211-215 |
| List of Laramie fossils collected at Rock Springs, Wyoming.....                                                                                             | 215     |
| List of Laramie fossils from Bitter Creek valley, two miles west of Point of Rocks station, Wyoming.....                                                    | 215-216 |
| List of the Laramie fossils collected at Point of Rocks Station, Wyoming.....                                                                               | 216     |
| List of the Laramie fossils collected at Black Buttes Station, Wyoming.....                                                                                 | 216-217 |
| Notes on the Laramie fossils of Bitter Creek valley.....                                                                                                    | 217-222 |
| Section of Laramie strata at Black Butte Station.....                                                                                                       | 222     |
| List of Cretaceous fossils from a cañon six miles northwest from White River Indian Agency, Northwestern Colorado.....                                      | 224     |
| Notes on the Cretaceous fossils from near White River Indian Agency.....                                                                                    | 224-226 |
| List of fossils of the Wasatch group collected in White River valley, Colorado.....                                                                         | 226     |
| Notes on the Wasatch fossils of White River valley.....                                                                                                     | 226-229 |
| List of Cretaceous fossils at Dodd's Ranch on Ashley's Fork, Utah.....                                                                                      | 229     |
| Notes on the Cretaceous fossils from Ashley's Fork.....                                                                                                     | 229-232 |
| List of fossils from the Cretaceous series at Coalville, Utah.....                                                                                          | 232-233 |
| Notes on the Cretaceous fossils of Coalville, Utah.....                                                                                                     | 233-241 |
| List of Laramie fossils from Bear River valley, Wyoming.....                                                                                                | 241-242 |
| Notes on Laramie fossils of Bear River valley, Wyoming.....                                                                                                 | 242-248 |
| List of Cretaceous fossils from the valley of Bear River, Wyoming.....                                                                                      | 248     |
| Notes on the Cretaceous fossils of Bear River valley.....                                                                                                   | 248-249 |
| List of Cretaceous fossils collected at Hilliard Station, Wyoming.....                                                                                      | 249     |
| Notes on the Cretaceous fossils of Hilliard Station.....                                                                                                    | 249-251 |
| General discussion.....                                                                                                                                     | 251-265 |
| Table showing the geographical distribution of the Cretaceous species collected during the season of 1877.....                                              | 252-253 |
| Fox Hills Group.....                                                                                                                                        | 252-253 |
| Colorado Group.....                                                                                                                                         | 253     |
| Table showing the geographical distribution of the fossils of the Laramie Group, collected during the season of 1877.....                                   | 255     |
| Catalogue of fossils.....                                                                                                                                   | 265     |

|                                                                                                                           | Page.   |
|---------------------------------------------------------------------------------------------------------------------------|---------|
| List of Cretaceous fossils sent by Mr. Arthur Lakes from Bear Creek valley, near Morrison, Colorado .....                 | 265-266 |
| List of fossils sent by Mr. L. C. Wooster from the vicinity of Greeley, Colo .....                                        | 266     |
| List of Cretaceous fossils sent by Mr. J. C. Hersey from Colorado .....                                                   | 266-267 |
| List of Cretaceous fossils sent by Capt. E. L. Berthoud from Colorado .....                                               | 267-268 |
| List of Cretaceous fossils sent by Prof. B. F. Mudge from Dennison, Tex .....                                             | 268     |
| List of Cretaceous fossils sent by Mr. G. W. Marnoch from Helotes, Bexar County, Texas .....                              | 268-269 |
| List of Cretaceous fossils sent by D. H. Walker to the Smithsonian Institution from near Salado, Bell County, Texas ..... | 269-270 |
| Concluding remarks .....                                                                                                  | 270-271 |

## 71.

WHITE, C. A. Paleontological Papers No. 9: Fossils of the Jura-Trias of Southeastern Idaho. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. v, art. v, pp. 105-117. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo, pp. 105-117. Two hundred separates printed (author's edition) without repaging, but with title-page, and in paper covers, together with Paleontological Papers No. 10.

Ten species are described, most of which are new; and the genus *Meekoceras*, Hyatt, is described for the first time in this article.

|                                                    | Page.   |
|----------------------------------------------------|---------|
| <i>Brachiopoda.</i>                                |         |
| <i>Terebratula</i> , Llhwyd .....                  | 108     |
| <i>T. semisimplex</i> , n. s., White, 1879 .....   | 108     |
| <i>T. augusta</i> , Hall & Whitfield .....         | 108-109 |
| <i>Conchifera.</i>                                 |         |
| <i>Avicula peeten</i> , McCoy .....                | 109     |
| <i>A. pealei</i> , n. s., White, 1879 .....        | 109-110 |
| <i>A. altus</i> , n. s., White, 1879 .....         | 110     |
| <i>A. idahoensis</i> , Meek .....                  | 110-111 |
| <i>Cephalopoda.</i>                                |         |
| <i>Meekoceras</i> , n. g., Hyatt, 1879 .....       | 111-112 |
| <i>M. aplanatum</i> , n. s., White, 1879 .....     | 112-113 |
| <i>M. muskhatchanus</i> , n. s., White, 1879 ..... | 113-114 |
| <i>M. gracilitatis</i> , n. s., White, 1879 .....  | 114-116 |
| <i>M. gracilitatis</i> var., White, 1879 .....     | 116     |
| <i>Arcestes</i> , Swess .....                      | 116     |
| <i>A. ? cirratus</i> , n. s., White, 1879 .....    | 116-117 |
| <i>Arcestes</i> ? ———? White, 1879 .....           | 117     |
| <i>Arcestes</i> ? ———? White, 1879 .....           | 117     |

## 72.

WHITE, C. A. Paleontological Papers No. 10. Conditions of Preservation of Invertebrate Fossils. <Bulletin U. S. Geol. and Geog. Surv. of the Terr. Vol. v, art. viii, pp. 133-141. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo., pp. 133-141. Two hundred separates printed (author's edition) without repaging, but with title page and with paper covers, together with Paleontological Papers No. 9.

The fact is pointed out that shells of different classes and families which have been fossilized under the same conditions are differently preserved.

## 73.

WHITE, C. A. Paleontological Papers No. 11. Remarks upon Certain Carboniferous Fossils from Colorado, Arizona, Idaho, Utah, and Wyoming, and Certain Cretaceous Corals from Colorado, together with Descriptions of New Forms. <Bulletin U. S. Geol. and Geog. Surv. of the Terr. Vol. v, art. xiv, pp. 209-221. Washington, 1879.

Same. Washington: Government Printing Office, 1879. 8vo., pp. 209-221. Two hundred separates printed (author's edition) without repaging, but with title-page and paper covers. The series of Paleontological Papers closes with this number.

Thirteen species are described, most of which are new. Attention is called to the commingling of Upper and Lower Carboniferous types in the Carboniferous strata of the western portion of North America.

| CARBONIFEROUS.                                  |  | Page.   |
|-------------------------------------------------|--|---------|
| <i>Actinozoa.</i>                               |  |         |
| <i>Leptopora</i> , Winchell.....                |  | 211     |
| <i>L. winchelli</i> , n. s., White, 1879.....   |  | 211-212 |
| <i>Echinodermata.</i>                           |  |         |
| <i>Granatocrinus</i> , Troost.....              |  | 212     |
| <i>G. lotoblastus</i> , White ? 1879.....       |  | 212-213 |
| <i>Polyzoa.</i>                                 |  |         |
| <i>Archimedes</i> , Lesueur.....                |  | 213     |
| <i>Archimedes</i> , ——— ? , White, 1879.....    |  | 213-214 |
| <i>Ptilodyctia</i> , Lonsdale.....              |  | 214     |
| <i>P. triangulata</i> , White, 1879.....        |  | 214-215 |
| <i>Brachiopoda.</i>                             |  |         |
| <i>Retzia</i> , King.....                       |  | 215     |
| <i>R. woosteri</i> , n. s., White, 1879.....    |  | 215-216 |
| <i>Conchifera.</i>                              |  |         |
| <i>Nuculana</i> , Link.....                     |  | 217     |
| <i>N. obesa</i> , n. s., White, 1879.....       |  | 216-216 |
| <i>Nucula</i> , Lamarck.....                    |  | 217     |
| <i>N. perumbonata</i> , n. s., White, 1879..... |  | 217     |
| <i>Allorisma</i> , King.....                    |  | 217     |
| <i>A. ? gilberti</i> , n. s., White, 1879.....  |  | 217-218 |
| <i>Gasteropoda.</i>                             |  |         |
| <i>Bellerophon</i> , Monfort.....               |  | 218     |
| <i>B. subpapillosus</i> , White, 1879.....      |  | 218-219 |
| <i>Murchisonia</i> , D'Archiac.....             |  | 219     |
| <i>M. terabra</i> , n. s., White, 1879.....     |  | 219     |
| <i>Pleurotomaria</i> , DeFrance.....            |  | 219     |
| <i>P. grayrillensis</i> , Norwood & Pratt.....  |  | 219-220 |

| CRETACEOUS FORMS.                                |  |         |
|--------------------------------------------------|--|---------|
| <i>Actinozoa.</i>                                |  |         |
| <i>Chaetetes</i> , Fischer.....                  |  | 220     |
| <i>C. ? ? dimissus</i> , n. s., White, 1879..... |  | 220-221 |
| <i>Beaumontia</i> , Edwards & Haime.....         |  | 221     |
| <i>B. ? solitaria</i> , n. s., White, 1879.....  |  | 221     |

## 74.

WHITE, C. A., and NICHOLSON, H. A. Supplement to the Bibliography of North American Invertebrate Paleontology. <Bulletin U. S. Geol. and Geog. Surv. of the Terr., vol. v, pp. 143-152. Washington, 1879.

Same. Washington: Government Printing Office, 1879, pp. 143-152. Two hundred separates printed (author's edition) with title-page and paper covers, but without repaging.

This supplement embraces works which were published after the publication of the Bibliography, besides some that were inadvertently omitted then.

Part I. Publications made in the United States. By C. A. White, pp. 143-149.

Part II. Publications made in British North America, the West Indies, and Europe. By H. Alleyne Nicholson, pp. 150-152.

## 75.

WHITE, C. A. Paleontology: Fossils of the Indiana Rocks. <State of Indiana. Second Annual Report of the Department of Statistics and Geology, 471-522, pls. i-xi. Indianapolis, 1880.



Same. In Indiana Geological Report, 1879-'80. From the Second Annual Report of the Bureau of Statistics and Geology. John Collett, Chief of Department. Indianapolis, 1881. 8vo. pp. 103-154, and 11 plates.

This book is an extract of the geological and biological matter from the volume of the preceding entry, repaged and bound in cloth, with new title-page as above.

This work is designed for popular use, and, with the exception of one variety, none of the species described and figured are new. The illustrations are also largely copies of formerly published figures. Forty-nine species of characteristic Silurian, Devonian, and Carboniferous forms are given.

| LOWER SILURIAN.                                                                           |  | Page.   |
|-------------------------------------------------------------------------------------------|--|---------|
| <i>Mollusca.</i>                                                                          |  |         |
| <i>Brachiopoda.</i>                                                                       |  |         |
| <i>Strophomena</i> , Rafinesque .....                                                     |  | 481     |
| <i>S. alternata</i> , Conrad, pl. i, figs. 6 and 7 .....                                  |  | 481-482 |
| <i>S. planumbona</i> , Hall, pl. ii, figs. 13 and 14 .....                                |  | 483-484 |
| <i>Orthis</i> , Dalman .....                                                              |  | 484     |
| <i>O. subquadrata</i> , Hall, pl. i, figs. 3-5 .....                                      |  | 481-485 |
| <i>O. occidentalis</i> , Hall, pl. ii, figs. 10-12 .....                                  |  | 485-487 |
| <i>O. biforata</i> , Schlotheim var. <i>acutilirata</i> , Conrad, pl. ii, figs. 5-9 ..... |  | 487-489 |
| <i>Rhynchonella</i> , Fischer .....                                                       |  | 489     |
| <i>R. capax</i> , Conrad, pl. i, figs. 9-11 .....                                         |  | 489-490 |
| <i>R. dentata</i> , Hall, pl. i, figs. 12-14 .....                                        |  | 490-491 |
| <i>Lamellibranchiata.</i>                                                                 |  |         |
| <i>Megaptera</i> , M. & W. ....                                                           |  | 491     |
| <i>Ambonychia</i> ( <i>Megaptera</i> ) <i>casei</i> , M. & W., pl. i, figs. 1 and 2 ..... |  | 491-492 |
| <i>Gasteropoda.</i>                                                                       |  |         |
| <i>Cyclonema</i> , Hall .....                                                             |  | 492     |
| <i>C. biliz</i> , Conrad, pl. ii, figs. 3 and 4 .....                                     |  | 492-493 |
| <i>Crustacea.</i>                                                                         |  |         |
| <i>Trilobites.</i>                                                                        |  |         |
| <i>Calymene</i> , Brongniart .....                                                        |  | 493     |
| <i>C. senaria</i> , Conrad, pl. ii, figs. 1 and 2 .....                                   |  | 493-495 |
| UPPER SILURIAN.                                                                           |  |         |
| <i>Echinodermata.</i>                                                                     |  |         |
| <i>Eucalyptocrinus</i> , Goldfuss .....                                                   |  | 495     |
| <i>E. crassus</i> , Hall, pl. iii, fig. 1 .....                                           |  | 495-496 |
| <i>Brachiopoda.</i>                                                                       |  |         |
| <i>Rhynchonella</i> , Fischer .....                                                       |  | 496     |
| <i>R. tennesseensis</i> , Roemer, pl. iii, figs. 2-4 .....                                |  | 496-497 |
| <i>Spirifer</i> , Sowerby .....                                                           |  | 497     |
| <i>S. radiata</i> , Sowerby, pl. iii, figs. 5 and 6 .....                                 |  | 497     |
| <i>Gasteropoda.</i>                                                                       |  |         |
| <i>Platystoma</i> , Conrad .....                                                          |  | 497     |
| <i>P. niagarensis</i> , Hall, pl. iii, figs. 7 and 8 .....                                |  | 497-498 |
| <i>Crustacea.</i>                                                                         |  |         |
| <i>Trilobites.</i>                                                                        |  |         |
| <i>Cyphaspis</i> , Burmeister .....                                                       |  | 498     |
| <i>C. christyi</i> , Hall, pl. iii, fig. 9 .....                                          |  | 498-499 |
| DEVONIAN.                                                                                 |  |         |
| <i>Polypi.</i>                                                                            |  |         |
| <i>Zaphrentis</i> , Rafinesque & Clifford .....                                           |  | 499     |
| <i>Zaphrentis</i> — ? White, 1880, pl. v, figs. 3 and 4 .....                             |  | 499     |
| <i>Favosites</i> , Lamarck .....                                                          |  | 499     |
| <i>Favosites</i> — ? White, 1880, pl. v, figs. 1 and 2 .....                              |  | 499     |
| <i>Brachiopoda.</i>                                                                       |  |         |
| <i>Strophodonta</i> , Hall .....                                                          |  | 500     |
| <i>S. demissa</i> , Conrad, pl. iv, figs. 6 and 7 .....                                   |  | 500-501 |
| <i>Orthis</i> , Dalman .....                                                              |  | 501     |
| <i>O. iowensis</i> , Hall (?), pl. v, figs. 10-12 .....                                   |  | 501-502 |
| <i>Atrypa</i> , Dalman .....                                                              |  | 502     |
| <i>A. reticularis</i> , Linnaeus, pl. v, figs. 7-9 .....                                  |  | 502     |
| <i>Athyris</i> , McCoy .....                                                              |  | 502     |
| <i>A. vittata</i> , Hall, pl. iv, figs. 8 and 9 .....                                     |  | 502-503 |
| <i>Spirifer</i> , Sowerby .....                                                           |  | 503     |

|                                                                                                      |                  |     |
|------------------------------------------------------------------------------------------------------|------------------|-----|
| <i>S. acuminata</i> , Conrad, pl. iv, figs. 1-3 .....                                                | Page.<br>503-504 |     |
| <i>S. curvatus</i> , Owen, pl. iv, figs. 4 and 5 .....                                               | 504              |     |
| <i>S. gregaria</i> , Clapp, pl. iv, figs. 10 and 11 .....                                            | 504-505          |     |
| <i>Lamellibranchiata.</i>                                                                            |                  |     |
| <i>Paracyclas</i> , Hall .....                                                                       | 505              |     |
| <i>P. elliptica</i> var. <i>occidentalis</i> , Hall, pl. v, figs. 5 and 6 .....                      | 505              |     |
| SUB-CARBONIFEROUS.                                                                                   |                  |     |
| <i>Polypi.</i>                                                                                       |                  |     |
| <i>Lithostrotion</i> , Fleming .....                                                                 |                  |     |
| <i>L. mamillare</i> , Castelnau, pl. vi, figs. 1 and 2 .....                                         | 506              |     |
| ( <i>L. canadense</i> , Castelnau), pl. vi, figs. 1 and 2 .....                                      | 506              |     |
| <i>Echinodermata.</i>                                                                                |                  |     |
| <i>Taxocrinus</i> , Phillips .....                                                                   | 506              |     |
| <i>T. multibrachiatus</i> , Lyon & Cassady var. <i>colletti</i> , White, 1880, pl. vii, fig. 3 ..... | 506-507          |     |
| <i>Scaphocrinus</i> , Hall .....                                                                     | 507              |     |
| <i>S. gibsoni</i> , White, 1878, pl. vii, fig. 7 .....                                               | 507-508          |     |
| <i>S. gurleyi</i> , White, 1878, pl. vii, fig. 8 .....                                               | 509              |     |
| <i>Actinocrinus</i> , Miller .....                                                                   | 510              |     |
| <i>A. wachsmuthi</i> , White, 1878, pl. vii, fig. 6 .....                                            | 510              |     |
| <i>Pentremites</i> , Say .....                                                                       | 511              |     |
| <i>P. pyriformis</i> , Say, pl. vii, fig. 9 .....                                                    | 511              |     |
| <i>P. godoni</i> , DeFrance, pl. vii, figs. 10 and 11 .....                                          | 511              |     |
| <i>P. conoides</i> , Hall, pl. vii, fig. 12 .....                                                    | 512              |     |
| <i>Brachiopoda.</i>                                                                                  |                  |     |
| <i>Spirifer</i> , Sowerby .....                                                                      | 512              |     |
| <i>S. tertius</i> , Hall, pl. vii, figs. 1 and 2 .....                                               | 512-513          |     |
| <i>Pteropoda.</i>                                                                                    |                  |     |
| <i>Conularia</i> , Miller .....                                                                      | 513              |     |
| <i>C. missouriensis</i> , Swallow ? pl. vi, fig. 4 .....                                             | 513              |     |
| <i>Gasteropoda.</i>                                                                                  |                  |     |
| <i>Platyceras</i> , Conrad .....                                                                     | 514              |     |
| <i>P. equilatera</i> , Hall, pl. vii, fig. 5 .....                                                   | 514              |     |
| <i>Cephalopoda.</i>                                                                                  |                  |     |
| <i>Goniatites</i> , De Haan .....                                                                    | 514              |     |
| <i>G. oweni</i> , Hall, pl. vii, figs. 3 and 4 .....                                                 | 515              |     |
| <i>Crustacea.</i>                                                                                    |                  |     |
| <i>Trilobites.</i>                                                                                   |                  |     |
| <i>Phillipsia</i> , Portlock .....                                                                   | 515              |     |
| <i>P. bufo</i> , M. & W., pl. vi, fig. 5 .....                                                       | 515-516          |     |
| COAL MEASURES.                                                                                       |                  |     |
| <i>Brachiopoda.</i>                                                                                  |                  |     |
| <i>Productus</i> , Sowerby .....                                                                     | 516              |     |
| <i>P. costatus</i> , Sowerby, pl. viii, figs. 7 and 8 .....                                          | 516-517          |     |
| <i>Spirifer</i> , Sowerby .....                                                                      | 517              |     |
| <i>S. cameratus</i> , Morton, pl. viii, fig. 3 .....                                                 | 517-518          |     |
| <i>Lamellibranchiata.</i>                                                                            |                  |     |
| <i>Alorisma</i> , King .....                                                                         | 518              |     |
| <i>A. subcuneata</i> , M. & H. ? pl. viii, figs. 1 and 2 .....                                       | 518-519          |     |
| <i>Gasteropoda.</i>                                                                                  |                  |     |
| <i>Polyphemopsis</i> , Portlock .....                                                                | 519              |     |
| <i>P. fusiformis</i> , Hall, pl. viii, fig. 6 .....                                                  | 519              |     |
| <i>Pleurotomaria</i> , DeFrance .....                                                                | 519              |     |
| <i>P. tabulata</i> , Hall, pl. viii, figs. 4 and 5 .....                                             | 519-520          |     |
| FOSSIL PLANTS.                                                                                       |                  |     |
| <i>Neuropteris</i> .....                                                                             |                  | 520 |
| <i>N. hirsuta</i> , Lesqx. pl. ix, figs. 1-3 .....                                                   | 520              |     |
| <i>N. varians</i> , Bunbury, pl. x, figs. 1-3 .....                                                  | 520-521          |     |
| <i>Callipteris</i> .....                                                                             | 521              |     |
| <i>C. sullivanti</i> , Lesqx. pl. ix, fig. 4 .....                                                   | 521              |     |
| <i>Annularia</i> .....                                                                               | 521              |     |
| <i>A. longifolia</i> , Brongniart ? pl. xi, figs. 1 and 2 .....                                      | 521-522          |     |
| <i>Odontopteris</i> .....                                                                            | 522              |     |
| <i>O. subcuneata</i> , Bunbury ? pl. xi, fig. 3 .....                                                | 522              |     |
| <i>Sphenopteris</i> .....                                                                            | 522              |     |
| <i>S. acuta</i> , Brongniart ? pl. xi, fig. 4 .....                                                  | 522              |     |

## 76.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1879. <Amer. Nat. vol. xiv, pp. 250-260. Philadelphia, 1880.

Same. Philadelphia, 1880, 8vo, pp. 250-260. One hundred separates printed without title-page, covers, or repaging.

This article, like those for the years 1880, 1881, and 1882, respectively, is a list of the titles of the works published within the year designated, together with remarks upon them.

## 77.

WHITE, C. A. On the Antiquity of Certain Subordinate Types of Fresh-water and Land Mollusca. <Amer. Jour. Sci., 3d ser., vol. xx, pp. 44-49. New Haven, 1880.

Same. New Haven, 1880, 8vo, pp. 44-49. Twenty separates printed without title-page, covers, or repaging.

It is shown that not only were many of the genera of living North American Mollusca established as early as the close of the Cretaceous period, but many of the subgenera were established thus early also.

## 78.

WHITE, C. A. Descriptions of new species of Carboniferous Invertebrate Fossils. <Proc. U. S. Nat. Mus., vol. ii, pp. 252-260, one plate. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, pp. 252-260, one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

Six species of Echinoderms are described, and the genus *Lecythocrinus* is proposed.

|                                                                          | Page.   |
|--------------------------------------------------------------------------|---------|
| <i>Actinozoa.</i>                                                        |         |
| <i>Acernularia</i> , Schweigger .....                                    | 255     |
| <i>A. adjunctiva</i> , n. s., White, 1879, plate i, figs. 1-3.....       | 255     |
| <i>Echinodermata.</i>                                                    |         |
| <i>Lecythocrinus</i> , n. g., White, 1879 .....                          | 256-257 |
| <i>L. olliculaformis</i> , n. s., White, 1879, pl. i, figs. 4 and 5..... | 257     |
| <i>Erisocrinus</i> , M. & W .....                                        | 257     |
| <i>E. planus</i> , n. s., White, 1879, pl. i, figs. 6 and 7 .....        | 257-258 |
| <i>Cyathocrinus</i> , Miller .....                                       | 258     |
| <i>C. stillatus</i> , n. s., White, 1879, pl. i, figs. 9 and 10 .....    | 258-259 |
| <i>Rhodocrinus</i> , Miller .....                                        | 259     |
| <i>R. vespertalis</i> , n. s., White, 1879, pl. i, figs. 11 and 12.....  | 259-260 |
| <i>Archeocidaris</i> , McCoy .....                                       | 260     |
| <i>A. diminutii</i> , n. s., White, 1879, pl. i, figs. 13 and 14.....    | 260     |

## 79.

WHITE, C. A. Note on *Endothyra ornata*. <Proc. U. S. Nat. Mus., vol. ii, p. 291. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, p. 291. One hundred and fifty separates printed, together with the papers of the two following entries, without title-page, covers, or repaging.

The discovery of that foraminiferous form in the Carboniferous rocks of Wyoming is noticed. It was previously known only in Europe.

## 80.

WHITE, C. A. Note on *Criocardium* and *Ethmocardium*. <Proc. U. S. Nat. Mus., vol. ii, pp. 291-292. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, pp. 291-292. One hundred and fifty separates printed, together with the papers of the preceding and the following entry, without title-page, covers, or repaging.

The new genus *Ethmocardium* is proposed.

81.

WHITE, C. A. Descriptions of new Cretaceous Invertebrate Fossils from Kansas and Texas. <Proc. U. S. Nat. Mus., vol. ii, pp. 292-298, pls. i-v. Washington, 1880.

Same. Washington: Government Printing Office, 1879, 8vo, pp. 292-298, and five plates. One hundred and fifty separates printed, together with the papers of the two preceding entries, without title-page, covers, or repaging.

Six species are described as new and illustrated.

|                                                                                                   | Page.   |
|---------------------------------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                                                  |         |
| <i>Ostrea</i> , Linnaeus .....                                                                    | 293     |
| Subgenus <i>Alectryonia</i> , Fischer .....                                                       | 293     |
| <i>O. (Alectryonia) blackii</i> , n. s., White, 1879, pl. iv, figs. 1 and 2 .....                 | 293     |
| <i>Exogyra</i> , Say .....                                                                        | 293     |
| <i>E. forniculata</i> , n. s., White, 1879, pl. iv, figs. 3 and 4 .....                           | 293-294 |
| <i>E. winchelli</i> , n. s., White, 1879, pl. ii, figs. 1 and 2, and pl. iii, figs. 1 and 2 ..... | 294-295 |
| <i>Gervillia</i> , DeFrance .....                                                                 | 295     |
| <i>G. mudgeana</i> , n. s., White, 1879, pl. v, figs. 3 and 4 .....                               | 295-296 |
| <i>Pteria</i> , Scopoli .....                                                                     | 296     |
| Subgenus <i>Oxytoma</i> , Meek .....                                                              | 296     |
| <i>P. (Oxytoma) salinensis</i> , n. s., White, 1879, pl. v, figs. 1 and 2 .....                   | 296-297 |
| <i>Pachymya</i> , Sowerby .....                                                                   | 297     |
| <i>P. compacta</i> , n. s., White, 1879, pl. vi, figs. 3 and 4 .....                              | 297     |
| <i>Thracia</i> , Leach .....                                                                      | 297     |
| <i>T. myæformis</i> , n. s., White, 1879, pl. vi, figs. 1 and 2 .....                             | 297-298 |

82.

WHITE, C. A. Report on the Carboniferous Invertebrate Fossils of New Mexico.

<Report upon U. S. Geog. and Geol. Surveys West of the 100th Meridian; in charge of Capt. George M. Wheeler, Corps of Engineers, U. S. Army. 4to., vol. iii; Supplement. Geology. Appendix, pp. i-xxxviii, pl. i-ii. Washington, 1881.

Same. Washington: Government Printing Office, 1881, 4to, pp. i-xxxviii, and two plates. Seventy-five separates printed, without title-page, covers, or repaging.

This report embraces an annotated catalogue of the species collected at each locality, and also descriptions of seventeen species, a part of which are new.

DESCRIPTIONS OF SPECIES.

|                                                                              |             |
|------------------------------------------------------------------------------|-------------|
| <i>Echinodermata.</i>                                                        |             |
| <i>Archæocidaris</i> , McCoy .....                                           | xxii        |
| <i>A. triplex</i> , n. s., White, 1881, pl. iv, figs. 3 <i>a-c</i> .....     | xxii-xxiii  |
| <i>Brachiopoda.</i>                                                          |             |
| <i>Orthis</i> , Dalman .....                                                 | xxiii       |
| <i>O. resupinoides</i> , Cox ? 1857, pl. iii, figs. 2 <i>a, b</i> .....      | xxiii-xxiv  |
| <i>Polyzoa.</i>                                                              |             |
| <i>Ptilodictya</i> , Lonsdale .....                                          | xxiv        |
| <i>P. triangulata</i> , White, 1878, pl. iv, figs. 2 <i>a-e</i> .....        | xxiv-xxv    |
| <i>Conchifera.</i>                                                           |             |
| <i>Myalina</i> , de Koninck .....                                            | xxv         |
| <i>M. permiana</i> , Swallow, 1[8]58, pl. iii, figs. 1 <i>a-d</i> .....      | xxv-xxvii   |
| <i>Pleurophorus</i> , King .....                                             | xxvii       |
| <i>P. subcostatus</i> , M. & W., 1866, pl. iii, fig. 8 <i>a</i> .....        | xxvii       |
| <i>Pteropoda.</i>                                                            |             |
| <i>Conularia</i> , Miller .....                                              | xxviii      |
| <i>C. crustula</i> , White, 1880, pl. iii, figs. 4 <i>a, b</i> .....         | xxviii      |
| <i>Gasteropoda.</i>                                                          |             |
| <i>Soleniscus</i> , M. & W .....                                             | xxviii      |
| <i>S. brevis</i> , n. s., White, 1881, pl. iv, figs. 5 <i>a-c</i> .....      | xxviii-xxix |
| <i>S. planus</i> , n. s., White, 1881, pl. iv, figs. 4 <i>a-c</i> .....      | xxix-xxx    |
| <i>Bellerophon</i> , Montfort .....                                          | xxx         |
| <i>B. inspeciosus</i> , n. s., White, 1881, pl. iv, figs. 1 <i>a-d</i> ..... | xxx-xxxi    |
| <i>Pleurotomaria</i> , DeFrance .....                                        | xxxi        |
| <i>P. perizomata</i> , n. s., White, 1881, pl. iii, figs. 5 <i>a-c</i> ..... | xxxi        |
| <i>Murchisonia</i> , d'Archiac .....                                         | xxxi        |
| <i>M. copoi</i> , n. s., White, 1881, pl. iii, figs. 10 <i>a, b</i> .....    | xxxi-xxxii  |



|                                                                            | Page.        |
|----------------------------------------------------------------------------|--------------|
| <i>Rotella</i> , Lamareck .....                                            | xxxii        |
| <i>R. verruculifera</i> , n. s., White, 1881, pl. iv, figs. 7 a-d .....    | xxxii-xxxiii |
| <i>Naticopsis</i> , McCoy .....                                            | xxxiii       |
| <i>N. wheeleri</i> , Swallow, var. White, 1881, pl. iv, figs. 6 a, b ..... | xxxiii-xxxiv |
| <i>N. monilifera</i> , White, 1880, pl. iii, figs. 3 a-d .....             | xxxiv-xxxv   |
| <i>N. altonensis</i> , McChesney, pl. iii, fig. 6a .....                   | xxxv         |
| <i>Loxonema</i> , Phillips .....                                           | xxxv         |
| <i>L. rugosa</i> , M. & W., pl. iii, fig. 7 a .....                        | xxxv         |
| <i>Aclis</i> , Loven .....                                                 | xxxv         |
| <i>A. ? stervensoni</i> , n. s., White, 1881, pl. iii, figs. 9 a, b .....  | xxxv-xxxvi   |

## 83.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1880. <Amer. Nat., vol. xvi, pp. 273-279. Philadelphia, 1881.

Same. Philadelphia, 1881, 8vo, pp. 273-279. One hundred separates printed without title-page, covers, or repaging.

This article is similar to that of entry No. 74.

## 84.

WHITE, C. A. English Sparrows refusing to eat worms. <Amer. Nat., vol. xv, pp. 671-672. Philadelphia, 1881.

It is observed that the sparrows refused to eat earth worms, which are favorite food with other birds, when they come to the surface after rains.

## 85.

WHITE, C. A. Note on the occurrence of *Productus giganteus* in California. <Proc. U. S. Nat. Mus., vol. iii, pp. 46-47, pl. i. Washington, 1881.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 46-47, and one plate. One hundred and fifty separates printed, together with the papers of the two following entries, without title-page, covers, or repaging.

The volume was first distributed without the plate; but the latter was afterward printed and distributed.

## 86.

WHITE, C. A. Note on *Acrothele*. <Proc. U. S. Nat. Mus., vol. iii, p. 47. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, p. 47. One hundred and fifty separates printed, together with the last, and the next following entry.

It is shown that *Acrotreta subsidua*, White, from Southern Utah, really belongs to the genus *Acrothele*, Linnarsson.

## 87.

WHITE, C. A. Description of a new Cretaceous *Pinna* from New Mexico. <Proc. U. S. Nat. Mus., vol. iii, pp. 47-48. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 47-48. One hundred and fifty separates printed, together with the papers of the two preceding entries, without title-page, covers, or repaging.

The author now thinks that the proposed new species (*Pinna stervensoni*) is only a variety of *P. petrina*, White.

|                                                     | Page. |
|-----------------------------------------------------|-------|
| <i>Pinna stervensoni</i> , n. s., White, 1880 ..... | 47-48 |

## 88.

WHITE, C. A. Note on the occurrence of *Stricklandinia salteri* and *S. davidsoni* in Georgia. <Proc. U. S. Nat. Mus., vol. iii, pp. 48-49. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 48-49. One hundred and fifty separates printed without title-page, covers, or repaging.

89.

WHITE, C. A. Description of a very large fossil Gasteropod from the State of Puebla, Mexico. <Proc. U. S. Nat. Mus., vol. iii, pp. 140-142, and one plate. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 140-142, and one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

The species described is from strata believed to be of Cretaceous age.

Page.

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| <i>Tplostoma</i> , Sharpe.....                                      | 141     |
| <i>T. princeps</i> , n. s., White, 1880, pl. ii, figs. 1 and 2..... | 141-142 |

90.

WHITE, C. A. Descriptions of new Invertebrate fossils from the Mesozoic and Cenozoic rocks of Arkansas, Wyoming, Colorado, and Utah. <Proc. U. S. Nat. Mus., vol. iii, pp. 157-162. Washington, 1881.

Same. Washington: Government Printing Office, 1880, 8vo, pp. 157-162. One hundred and fifty separates printed without title-page, covers, or repaging.

Nine species are described as new; but none are illustrated.

Page.

Mollusca.

Conchifera.

|                                                      |         |
|------------------------------------------------------|---------|
| <i>Pteria</i> , Scopoli.....                         | 157     |
| Subgenus <i>Oxytoma</i> , Meek.....                  | 157     |
| <i>P. (Oxytoma) erecta</i> , n. s., White, 1880..... | 157-158 |
| <i>Solemya</i> , Lamarek.....                        | 158     |
| <i>S. bilix</i> , n. s., White, 1880.....            | 158     |
| <i>Lucina</i> , Bruguiere.....                       | 158     |
| <i>L. profunda</i> , n. s., White, 1880.....         | 158-159 |

Gasteropoda.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Planorbis</i> , Guettard.....                                  | 159     |
| <i>P. aequalis</i> , n. s., White, 1880.....                      | 159     |
| Subgenus <i>Gyraulus</i> , Agassiz.....                           | 159     |
| <i>Planorbis (Gyraulus) militaris</i> , n. s., White, 1880.....   | 159-160 |
| <i>Limnaea</i> , Lamarek.....                                     | 160     |
| Subgenus <i>Leptolimnaea</i> , Swainson.....                      | 160     |
| <i>Limnaea (Leptolimnaea) minuscula</i> , n. s., White, 1880..... | 160     |
| <i>Helix</i> , Linnaeus.....                                      | 160     |
| Subgenus <i>Patula</i> , Haldeman.....                            | 160     |
| <i>H. (Patula) sepulta</i> , n. s., White, 1880.....              | 160     |

Articulata.

Vermes.

|                                                 |     |
|-------------------------------------------------|-----|
| <i>Spirorbis</i> , Lamarek.....                 | 161 |
| <i>S. ? dickhauti</i> , n. s., White, 1880..... | 161 |

Crustacea.

|                                             |         |
|---------------------------------------------|---------|
| <i>Callinassa</i> , Leach.....              | 161     |
| <i>C. ulrichi</i> , n. s., White, 1880..... | 161-162 |

91.

WHITE, C. A. [Review of] A. G. Wetherby: Description of new fossils from the Lower Silurian and Subcarboniferous rocks of Ohio and Kentucky. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 1 [April, 1881], pp. 77-85, pl. ii.) <Neues Jahrbuch für Mineralogie, Geologie, und Palæontologie, ii Band, p. 408. Stuttgart, 1881.

92.

WHITE, C. A. [Review of] A. G. Wetherby: Description of new fossils from the Lower Silurian and Subcarboniferous rocks of Kentucky. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 2 [July, 1881], pp. 177-179, pl. v.) <Neues Jahrbuch für Mineralogie, Geologie, und Palæontologie, ii Band, p. 408. Stuttgart, 1881.

## 93.

WHITE, C. A. [Review of] S. A. Miller: New species of fossils and remarks upon others from the Niagara Group of Illinois. (Journ. Cincinnati Soc. Nat. History, vol. iv, no. 2 [July, 1881], pp. 166-176, pl. iv.) < Neues Jahrbuch für Mineralogie, Geologie, und Palaeontologie. ii Band, p. 408. Stuttgart, 1881.

## 94.

WHITE, C. A. Fossils of the Indiana rocks, No. 2. < Indiana, Department of Geology and Natural History, Eleventh Annual Report. John Collet, State Geologist, 1881; pp. 347-401, pls. xxxvii-lv. Indianapolis, 1882.

Same. Indianapolis, 1882; 8vo, pp. 347-401, with 19 plates and the index for the whole volume. Fifty separates printed without title-page or repaging, and without date.

The object of his memoir, like that of entry No. 75, is largely that of popular instruction. The greater part of the species here described and figured are republished from the works of other authors, only four of the species being new. Twelve of the plates are devoted to figures of fossil corals, which figures were engraved many years ago by J. W. Van Cleave, to accompany a work on fossil corals by himself, which he did not live to publish or to finish. There are 29 species of these corals here described and figured, besides 20 other species, all from Paleozoic rocks.

## Description of fossils.

## UPPER SILURIAN.

|                                                                                            | Page.   |
|--------------------------------------------------------------------------------------------|---------|
| <i>Mollusca.</i>                                                                           |         |
| <i>Cephalopoda.</i>                                                                        |         |
| <i>Gyroceras</i> , Meyer .....                                                             | 356     |
| <i>G. elrodi</i> , n. s., White, 1882, pl. xxxvii, fig. 1, and pl. xxxviii, figs. 2-4..... | 356-358 |
| <i>Orthoceras</i> , Breynius.....                                                          | 358     |
| <i>O. annulatum</i> , Sowerby, 1818, pl. xxxviii, fig. 1.....                              | 358     |

## SUBCARBONIFEROUS.

|                                                                             |         |
|-----------------------------------------------------------------------------|---------|
| <i>Gasteropoda.</i>                                                         |         |
| <i>Patella</i> , Linnæus.....                                               | 359     |
| <i>P. levettei</i> , n. s., White, 1882, pl. xxxix, figs. 4 and 5.....      | 359     |
| <i>Bellerophon</i> , Montfort.....                                          | 359     |
| <i>B. sublevis</i> , Hall, 1858, pl. xl, figs. 5-7 .....                    | 359-360 |
| <i>B. gibsoni</i> , n. s., White, 1882, pl. xli, figs. 4-6.....             | 360-361 |
| <i>Brachiopoda.</i>                                                         |         |
| <i>Terebratulula</i> , Lhwyd .....                                          | 361     |
| <i>T. formosa</i> , Hall, 1858, pl. xxxix, figs. 6-8.....                   | 361     |
| <i>Bryozoa.</i>                                                             |         |
| <i>Archimedes</i> , Lesueur.....                                            | 361     |
| <i>A. laxa</i> , Hall, 1857, pl. xli, fig. 7.....                           | 361-362 |
| <i>Radiata.</i>                                                             |         |
| <i>Echinodermata.</i>                                                       |         |
| <i>Lepidesthes</i> , M. & W.....                                            | 362     |
| <i>L. colletti</i> , White, 1878, pl. xli, figs. 2 and 3.....               | 362-363 |
| <i>Agaricocrinus</i> , Troost.....                                          | 363     |
| <i>A. springeri</i> , n. s., White, 1882, pl. xl, figs. 2-4.....            | 363-364 |
| <i>Onychocrinus</i> , Lyon & Casseday ..                                    | 365     |
| <i>O. exsculptus</i> , Lyon & Casseday, 1860, pl. xl, fig. 1 .....          | 365-366 |
| <i>O. ramulosus</i> , Lyon & Casseday, 1859, pl. xxxix, figs. 2 and 3 ..... | 366-367 |
| <i>Cyathocrinus</i> , Miller .....                                          | 367     |
| <i>C. multibrachiatus</i> , Lyon & Casseday, 1859, pl. xxxix, fig. 1.....   | 367     |
| <i>Platycrinus</i> , Miller.....                                            | 368     |
| <i>P. hemisphericus</i> , M. & W., 1865, pl. xli, fig. 1.....               | 368-369 |
| <i>Protista.</i>                                                            |         |
| <i>Porifera.</i>                                                            |         |
| <i>Palaecis</i> , Haimo.....                                                | 369     |
| <i>P. cuneatus</i> , M. & W., 1860, pl. xli, figs. 8 and 9 .....            | 369-370 |

*Mollusca.*

COAL-MEASURES.

*Gasteropoda.*

|                                                             |         |
|-------------------------------------------------------------|---------|
| <i>Polyphemopsis</i> , Portlock .....                       | 370     |
| <i>P. nitidula</i> , M. & W., pl. xlii, figs. 7 and 8 ..... | 370-371 |

*Conchifera.*

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Nucula</i> , Lamarek .....                                     | 371     |
| <i>N. ventricosa</i> , Hall, 1858, pl. xlii, figs. 9 and 10 ..... | 371-372 |

*Brachiopoda.*

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Spirifer</i> , Sowerby .....                                   | 372     |
| Subgenus <i>Martinia</i> , McCoy .....                            | 372     |
| <i>S. (Martinia) lineatus</i> , Martin, pl. xlii, figs. 4-6 ..... | 372-373 |
| <i>Productus</i> , Sowerby .....                                  | 373     |
| <i>P. punctatus</i> , Martin, pl. xlii, figs. 1-3 .....           | 373     |

FOSSIL PLANTS.

*Taomurus.*

|                                                                  |         |
|------------------------------------------------------------------|---------|
| <i>T. colletti</i> , Lesquereux, 1870, pl. xliii, fig. 1 .....   | 374     |
| <i>Sphenophyllum</i> , Brongniart .....                          | 374     |
| <i>S. schlotheimi</i> , Brongniart, pl. xliii, fig. 2 .....      | 374-375 |
| <i>S. emarginatum</i> , Brongniart, pl. xliii, fig. 3 .....      | 375     |
| Van Cleve's Fossil Corals, identified by C. A. White, M. D. .... | 375     |

LOWER SILURIAN.

|                                                                 |         |
|-----------------------------------------------------------------|---------|
| <i>Streptelasma</i> , Hall .....                                | 376     |
| <i>S. corniculum</i> , Hall, pl. li, figs. 2-4 .....            | 376     |
| <i>Paleophyllum</i> , Billings .....                            | 377     |
| <i>P. divaricans</i> , Nicholson, pl. lii, fig. 4 .....         | 377-378 |
| <i>Faristella</i> , Hall .....                                  | 378     |
| <i>F. stellata</i> , Hall, pl. xliv, figs. 1 and 2 .....        | 378     |
| <i>Protarea</i> , Edwards & Haime .....                         | 378     |
| <i>P. vetusta</i> , Edwards & Haime, pl. xlix, fig. 4 .....     | 378-379 |
| <i>Constellaria</i> , Dana .....                                | 379     |
| <i>C. antheloidea</i> , Hall, pl. xlv, figs. 1-3 .....          | 379-380 |
| <i>Monticulipora</i> , d'Orbigny .....                          | 380     |
| <i>M. frondosa</i> , d'Orbigny, pl. xlviii, figs. 2 and 3 ..... | 380-381 |

UPPER SILURIAN.

|                                                                |         |
|----------------------------------------------------------------|---------|
| <i>Luellia</i> , Edwards & Haime .....                         | 381     |
| <i>L. americana</i> , Edwards & Haime, pl. xlvii, fig. 5 ..... | 381-382 |
| <i>Holysites</i> , Fischer .....                               | 382     |
| <i>H. catenulata</i> , Linnaeus, pl. xlv, figs. 4-7 .....      | 382     |
| <i>Helolites</i> , Dana .....                                  | 383     |
| <i>H. elegans</i> , Hall, pl. xlviii, fig. 4 .....             | 383     |
| <i>Favosites</i> , Lamarek .....                               | 383     |
| <i>F. favosus</i> , Goldfuss, pl. lii, figs. 1 and 2 .....     | 383-384 |
| <i>Cladopora</i> , Hall .....                                  | 384     |
| <i>C. reticulata</i> , Hall, pl. xlvii, fig. 6 .....           | 384-385 |
| <i>Clathropora</i> , Hall .....                                | 385     |
| <i>C. frondosa</i> , Hall, pl. lv, fig. 3 .....                | 385-386 |

DEVONIAN.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Acerrularia</i> , Schweigger .....                             | 386     |
| <i>A. davidsoni</i> , Edwards & Haime, pl. xlix, fig. 2 .....     | 386     |
| <i>Diplophyllum</i> , Lonsdale .....                              | 387     |
| <i>D. archiaci</i> , Billings, pl. i, fig. 1 .....                | 387     |
| <i>D. stramineum</i> , Billings, pl. xviii, fig. 1 .....          | 388     |
| <i>D. arundinaceum</i> , Billings, pl. li, fig. 1 .....           | 389-390 |
| <i>Eridophyllum</i> , Edwards & Haime .....                       | 390     |
| <i>E. strictum</i> , Edwards & Haime, pl. xlix, fig. 1 .....      | 390-391 |
| <i>Cystiphyllum</i> , Lonsdale .....                              | 391     |
| <i>C. vesiculosum</i> , Goldfuss, pl. lv, figs. 1 and 2 .....     | 391-392 |
| <i>Zaphrentis</i> , Rafinesque .....                              | 393     |
| <i>Z. rafinesquii</i> , Edwards & Haime, pl. xlv, figs. 3-5 ..... | 393     |
| <i>Amplexus</i> , Sowerby .....                                   | 393     |



|                                                                                  | Page.   |
|----------------------------------------------------------------------------------|---------|
| <i>A. yandelli</i> , Edwards & Haime, pl. xlv, figs. 1 and 2.....                | 393-394 |
| <i>Favosites</i> , Lamarek .....                                                 | 394     |
| <i>F. basaltica</i> , Goldfuss, pl. liv, fig. 1 .....                            | 394-395 |
| <i>F. polymorpha</i> , Goldfuss, pl. l, fig. 2, pl. liii, figs. 1 and 2 .....    | 395     |
| <i>F. polymorpha</i> var. <i>dubia</i> , Nicholson, 1874, pl. liii, fig. 3 ..... | 396     |
| <i>Favosites</i> —— (?) White, 1882, pl. liv, fig. 2. ....                       | 396     |
| <i>Fistulipora</i> , McCoy .....                                                 | 396     |
| <i>F. canadensis</i> , Billings, pl. xlvii, figs. 1 and 2.....                   | 396-397 |
| <i>Alveolites.</i>                                                               |         |
| <i>A. goldfussi</i> , Billings, pl. liv, fig. 3.....                             | 397-398 |
| <i>Striatopora</i> , Hall .....                                                  | 398     |
| <i>S. linnaeana</i> , Billings, pl. xlvii, fig. 7.....                           | 398     |
| <i>Syringopora</i> , Goldfuss .....                                              | 398     |
| <i>S. perlegans</i> , Billings, pl. xlix, fig. 3 .....                           | 398-399 |
| <i>S. macleari</i> , Billings, pl. xlvii, fig. 3 .....                           | 399-400 |
| <i>Stromatopora</i> , Blainville .....                                           | 400     |
| <i>S. pustulifera</i> , Winchell? pl. liii, figs. 4 and 5 .....                  | 400     |

## SUBCARBONIFEROUS.

|                                                       |     |
|-------------------------------------------------------|-----|
| <i>Lithostrotion</i> , Fleming .....                  | 401 |
| <i>L. mamillare</i> , Castelnau, pl. lii, fig. 3..... | 401 |

## 95.

WHITE, C. A. Progress of Invertebrate Paleontology in the United States for the year 1881. <American Naturalist, vol. xvi, pp. 887-891. Philadelphia, 1882.

Same. Philadelphia, 1882. 8vo, pp. 887-891. One hundred separates printed without title page, covers, or repaging.

This article is similar to those of entries 74 and 81.

## 96.

WHITE, C. A. Artesian Wells upon the Great Plains. <North American Review, vol. 135, pp. 187-195. New York, 1882.

Same. New York, 1882. 8vo, 9 pages. Fifty separates printed without title-page or covers, but repaged.

This article gives some results of the examination of the region of Eastern Colorado by a commission appointed by the U. S. Commissioner of Agriculture, of which the author was chief.

## 97.

WHITE, C. A. Tanganyika Shells. <Nature, 4to, vol. xxv, pp. 101-102. London and New York, 1882.

This note suggests the probable identity of *Paramelania* Smith, a proposed molluscan subgenus now living in Lake Tanganyika, Africa, with the fossil genus *Pyrgulifera* Meek, from the Laramie Group of Southwestern Wyoming.

## 98.

WHITE, C. A. On certain conditions attending the geological descent of some North American types of fresh-water gill-bearing Mollusks. <Amer. Jour. Sci., 3d ser., vol. xxiii, pp. 382-386. New Haven, 1882.

Same. New Haven, 1882. 8vo, pp. 382-386. Twenty separates printed without title-page, covers, or repaging.

The substance, not the words, of this article is an extract from parts of an illustrated work, the title of which is given in entry No. 105. The opinion is advanced that the present gill-bearing fauna of the Mississippi River system has been derived in part from the Laramie sea and the fresh-water lakes which succeeded it, by means of the persistence of their outlets as rivers, down to the present time.

99.

WHITE, C. A. Artesian Wells upon the Great Plains; being the report of a geological commission appointed to examine a portion of the Great Plains east of the Rocky Mountains, and report upon the localities deemed most favorable for making experimental borings. Department of Agriculture, pp. 1-38, pl. i. Washington, 1882.

The map is a copy of part of sheet xi of the atlas of Colorado, published by the United States Geological Survey of the Territories.

100.

WHITE, C. A. On certain Cretaceous fossils from Arkansas and Colorado. <Proc. U. S. National Museum, vol. iv, pp. 136-139, pl. i. Washington, 1882.

Same. Washington, Government Printing Office, 1882. 8vo, pp. 136-139, and one plate. One hundred and fifty separates printed without title-page, covers, or repaging.

Six species are described and figured, two of which are new.

|                                                                                  | Page. |
|----------------------------------------------------------------------------------|-------|
| <i>Callianassa ulrichi</i> , White, 1880, pl. i, figs. 10 and 11.....            | 137   |
| <i>Tubulostium dickhauti</i> , White, 1880, pl. i, figs. 12 and 13.....          | 138   |
| <i>Cantharus? julesburgensis</i> , n. s., White, 1882, pl. i, figs. 1 and 2..... | 138   |
| <i>Lucina profunda</i> , White, 1880, pl. i, figs. 5 and 6.....                  | 138   |
| <i>Lucina cleburni</i> , n. s., White, 1882, pl. i, figs. 3 and 4.....           | 139   |
| <i>Solemya bilix</i> , White, 1880, pl. i, fig. 9.....                           | 139   |
| <i>Pteria (Ozytoma) erecta</i> , White, 1880, pl. i, figs. 7 and 8.....          | 139   |

101.

WHITE, C. A. [Review of] S. A. Miller: Description of some new and remarkable crinoids and other fossils of the Hudson River Group, and notice of *Strotocrinus bloomfieldensis*. (Journ. Cincinnati Soc. Nat. History. Vol. iv, No. 1 [April, 1881], pp. 69-77, pl. i.) <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. I Band, p. 307. Stuttgart, 1881.

102.

WHITE, C. A. [Review of] Henry Newton, E. M., and Walter P. Jenney, E. M.: Report on the Geology and resources of the Black Hills of Dakota. 4to, pp. 1-555, with Atlas. Washington, 1880. <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. II Band, pp. 216-218. Stuttgart, 1882.

103.

WHITE, C. A. [Review of] United States Geological Survey: Annual Report for 1881 of J. W. Powell, Director. Imperial 8vo, pp. 1-558, lxi plates, and 32 woodcuts. Washington, 1882. <Neues Jahrbuch für Mineralogie, Geologie, und Paläontologie. II Band, pp. 365-366. Stuttgart, 1882.

104.

WHITE, C. A. Contributions to Invertebrate Paleontology, No. 2: Cretaceous fossils from the Western States and Territories. <Twelfth Annual Report of the United States Geological and Geographical Survey of the Territories (for the year 1878). pp. 1-33; appendix, pp. 38, 39, pls. xi-xviii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 1-39, and plates 11-18. Two hundred separates printed (author's edition) without repaging, but with title-page and covers, together with Contributions to Invertebrate Paleontology, Nos. 3, 4, 5, 6, 7, and 8. In 1883 100 additional copies of the same were printed in the same form. The title-page in both these cases differs from the title which heads the text by the omission of the word "Invertebrate."

Thirty-seven species are described and figured, five of which are new. On plate xviii ten species are also illustrated which were originally published by Dr. Shumard, but were never before illustrated.

## CRETACEOUS.

|                                                                                                               | Page. |
|---------------------------------------------------------------------------------------------------------------|-------|
| <i>Actinozoa.</i>                                                                                             |       |
| <i>Clactetes</i> Fischer.....                                                                                 | 7     |
| <i>C. ? ? dimissus</i> , White, 1879, pl. xii, fig. 14 <i>a</i> .....                                         | 7     |
| <i>Beaumontia</i> , Edwards & Haimé.....                                                                      | 8     |
| <i>B. ? solitaria</i> , n. s., White, 1880, pl. xii, figs. 13 <i>a-c</i> .....                                | 8     |
| <i>Echinodermata.</i>                                                                                         |       |
| <i>Ophioderma</i> .....                                                                                       | 8     |
| <i>O. ? bridgerensis</i> , Meek, 1873, pl. xii, fig. 12 <i>a</i> .....                                        | 8-9   |
| <i>Conchifera.</i>                                                                                            |       |
| <i>Ostrea</i> , Linnæus.....                                                                                  | 9     |
| <i>O. soleniscus</i> , Meek, 1873, pl. xi, figs. 2 <i>a, b</i> .....                                          | 9-10  |
| <i>O. anomioides</i> , Meek, 1873, pl. xi, figs. 4 <i>a, b</i> .....                                          | 10-11 |
| Subgenus <i>Alectryonia</i> , Fischer.....                                                                    | 11    |
| <i>O. (Alectryonia) blackii</i> , White, 1880, pl. xiv, figs. 1 <i>a, b</i> ; pl. xvii, fig. 4 <i>a</i> ..... | 11-12 |
| <i>Exogyra</i> , Say.....                                                                                     | 12    |
| <i>E. winchelli</i> , White, 1880, pl. xiii, figs. 1 <i>a-d</i> .....                                         | 12    |
| <i>E. forniculata</i> , White, 1880, pl. xiv, figs. 2 <i>a, b</i> .....                                       | 13-14 |
| <i>Anomia</i> , Linnæus.....                                                                                  | 14    |
| <i>A. propatoris</i> , n. s., White, 1880, pl. xii, figs. 15 <i>a, b</i> .....                                | 14-15 |
| <i>Pteria</i> , Scopoli.....                                                                                  | 15    |
| <i>P. ? ? stabilitatis</i> , n. s., White, 1880, pl. xvii, fig. 3 <i>a</i> .....                              | 15    |
| Subgenus <i>Oxytoma</i> , Meek.....                                                                           | 15    |
| <i>P. (Oxytoma) salinensis</i> , White, 1880, pl. xvi, figs. 2 <i>a, b</i> .....                              | 15-16 |
| <i>Gervillia</i> , DeFrance.....                                                                              | 16    |
| <i>G. mudgeana</i> , White, 1880, pl. xiv, figs. 3 <i>a, b</i> .....                                          | 16-17 |
| <i>Pinna</i> , Linnæus.....                                                                                   | 17    |
| <i>P. lakesii</i> , White, 1879, pl. xi, figs. 1 <i>a, b</i> .....                                            | 17-18 |
| <i>Volsella</i> , Scopoli.....                                                                                | 18    |
| Subgenus <i>Brachydontes</i> , Swainson.....                                                                  | 18    |
| <i>V. (Brachydontes) multilinigera</i> , Meek, 1873, pl. xi, fig. 3 <i>a</i> .....                            | 18-19 |
| <i>Barbatia</i> , Gray.....                                                                                   | 19    |
| <i>B. barbulata</i> , n. s., White, 1880, pl. xi, fig. 5 <i>a</i> .....                                       | 19    |
| <i>Cyrena</i> , Lamarck.....                                                                                  | 20    |
| <i>C. carletoni</i> , Meek, 1873, pl. xii, figs. 16 <i>a, b</i> .....                                         | 20-21 |
| <i>Pharella</i> , Gray.....                                                                                   | 21    |
| <i>P. ? preloi</i> , Meek, 1873, pl. xi, figs. 6 <i>a, b</i> .....                                            | 21-22 |
| <i>Tapes</i> , Mühlfeldt.....                                                                                 | 22    |
| <i>T. hülgardi</i> , Shumard, 1860, pl. xvi, figs. 3 <i>a-c</i> .....                                         | 22    |
| <i>Pachymya</i> , Sowerby.....                                                                                | 22    |
| <i>P. ? compacta</i> , White, 1880, pl. xvii, figs. 4 <i>a, b</i> .....                                       | 22-23 |
| <i>Thracia</i> , Leach.....                                                                                   | 23    |
| <i>T. myaciformis</i> , White, 1880, pl. xvii, figs. 2 <i>a, b</i> .....                                      | 23    |
| <i>Gasteropoda.</i>                                                                                           |       |
| <i>Melampus</i> , Montfort.....                                                                               | 23    |
| <i>M. ? antiquus</i> , Meek, 1873, pl. xii, figs. 11 <i>a-d</i> .....                                         | 23-25 |
| <i>Melampus</i> ——— ? Meek, 1873, pl. xii, fig. 6 <i>a</i> .....                                              | 25    |
| <i>Neritina</i> , Lamarck.....                                                                                | 25    |
| <i>N. bannisteri</i> , Meek, 1873, pl. xii, figs. 10 <i>a-c</i> .....                                         | 25-26 |
| <i>N. pisiiformis</i> , Meek, 1873, pl. xii, figs. 9 <i>a-c</i> .....                                         | 26-27 |
| Subgenus <i>Velatella</i> , Meek.....                                                                         | 27    |
| <i>N. (Velatella) bellatula</i> , Meek, 1873, pl. xii, figs. 8 <i>a, b</i> .....                              | 27-28 |
| <i>N. (Velatella) carditoides</i> , Meek, 1873, pl. xii, fig. 7 <i>a</i> .....                                | 28-29 |
| <i>Euspira</i> , Agassiz.....                                                                                 | 29    |
| <i>E. utahensis</i> , White.....                                                                              | 29    |
| <i>Tessarolax</i> , Gabb.....                                                                                 | 29    |
| <i>T. hitzi</i> , n. s., White, 1880, pl. xv, fig. 2 <i>a</i> .....                                           | 29-30 |
| <i>Lispedesthes</i> , White.....                                                                              | 30    |
| <i>L. ? obscurata</i> , n. s., White, 1880, pl. xi, figs. 7 <i>a, b</i> .....                                 | 30-31 |
| <i>Turritella</i> , Lamarck.....                                                                              | 31    |
| <i>T. spironema</i> , Meek, 1873, pl. xii, fig. 3 <i>a</i> .....                                              | 31-32 |
| <i>Eulimella</i> , Forbes.....                                                                                | 32    |
| <i>E. ? chrysallis</i> , Meek, 1873, pl. xii, fig. 4 <i>a</i> .....                                           | 32-33 |
| <i>E. ? inconspua</i> , Meek, 1873, pl. xii, fig. 5 <i>a</i> .....                                            | 33    |
| <i>Valata</i> , Müller.....                                                                                   | 33    |
| <i>V. nana</i> , Meek, 1873, pl. xii, figs. 17 <i>a, b</i> .....                                              | 33-34 |

|                                                                                                               | Page. |
|---------------------------------------------------------------------------------------------------------------|-------|
| <i>Fusus</i> , Lamarek .....                                                                                  | 34    |
| <i>F. ? utahensis</i> , Meek, 1873, pl. xii, fig. 2 <i>a</i> .....                                            | 34    |
| <i>Fasciolaria</i> , Lamarek .....                                                                            | 34    |
| Subgenus <i>Piostocheilus</i> , Meek.....                                                                     | 34    |
| <i>F. (Piostocheilus) alleni</i> , n. s., White, 1880, pl. xii, fig. 1 <i>a</i> .....                         | 34-35 |
| <i>Cephalopoda</i> .                                                                                          |       |
| <i>Prionocyclus</i> , Meek .....                                                                              | 35    |
| <i>P. wyomingensis</i> , Meek, 1876, pl. xv, figs. 1 <i>a-e</i> .....                                         | 35-36 |
| <i>Articulata</i> .                                                                                           |       |
| <i>Crustacea</i> .                                                                                            |       |
| <i>Paramithrax</i> , Milne-Edwards.....                                                                       | 37    |
| <i>P. ? walkeri</i> , n. s., 1880, Whittfield, pl. xvi, fig. 1 <i>a</i> , and pl. xvii, fig. 1 <i>a</i> ..... | 37-38 |

Appendix to Contributions to Invertebrate Paleontology No. 2.

|                                                                               |    |
|-------------------------------------------------------------------------------|----|
| <i>Cidaris hemigranosis</i> , Shumard, pl. xviii, figs. 2 <i>a, b</i> .....   | 38 |
| <i>Gervillia gregaria</i> , Shumard, pl. xviii, fig. 3 <i>a</i> .....         | 38 |
| <i>Nucula bellastrata</i> , Shumard, pl. xviii, figs. 5 <i>a-c</i> .....      | 38 |
| <i>Nucula haydeni</i> , Shumard, pl. xviii, figs. 6 <i>a, b</i> .....         | 38 |
| <i>Cardium choctawense</i> , Shumard, pl. xviii, figs. 7 <i>a-c</i> .....     | 38 |
| <i>Cytheria lamarensis</i> , Shumard, pl. xviii, figs. 4 <i>a, b</i> .....    | 39 |
| <i>Ancyloceras annulatum</i> , Shumard, pl. xviii, figs. 10 <i>a, b</i> ..... | 39 |
| <i>Scaphites vermiculus</i> , Shumard, pl. xviii, fig. 8 <i>a</i> .....       | 39 |
| <i>Ammonites graysonensis</i> , Shumard, pl. xviii, figs. 9 <i>a, b</i> ..... | 39 |
| <i>Ammonites svallovi</i> , Shumard, pl. xviii, fig. 1 <i>a</i> .....         | 39 |

105.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 3.—Certain Tertiary Mollusca from Colorado, Utah, and Wyoming. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 41-48, and pl. xix. Washington, 1883.

Same. Washington, Government Printing Office, 1880. 8vo, pp. 41-48, and pl. xix. Three hundred separates printed. See remarks following entry No. 104.

Ten species are described and figured, one of which is new.

|                                                                                    | Page. |
|------------------------------------------------------------------------------------|-------|
| <i>Conchifera</i> .                                                                |       |
| <i>Unio</i> , Retzius .....                                                        | 41    |
| <i>U. shoshonensis</i> , White, 1876, pl. xix, figs. 2 <i>a, b</i> .....           | 41-42 |
| <i>U. washakiensis</i> , Meek, 1871, pl. xix, figs. 3 <i>a, b</i> .....            | 42-43 |
| <i>U. meeki</i> , White, 1877, pl. xix, fig. 1 <i>a</i> .....                      | 43-44 |
| <i>Gasteropoda</i> .                                                               |       |
| <i>Planorbis</i> , Müller .....                                                    | 44    |
| <i>P. cirratus</i> , White, 1879, pl. xix, figs. 5 <i>a-c</i> .....                | 44-45 |
| <i>Physa</i> , Draparnaud .....                                                    | 45    |
| <i>P. bridgerensis</i> , Meek, 1873, pl. xix, figs. 10 <i>a, b</i> .....           | 45    |
| <i>Succinea</i> , Draparnaud.....                                                  | 45    |
| Subgenus <i>Brachyspira</i> , Pfeiffer .....                                       | 45    |
| <i>S. (Brachyspira) papillispira</i> , White, 1876, pl. xix, fig. 4 <i>a</i> ..... | 45-46 |
| <i>Pupa</i> , Lamarck .....                                                        | 46    |
| <i>P. arenula</i> , White, 1876, pl. xix, figs. 8 <i>a, b</i> .....                | 46    |
| <i>P. atavuncula</i> , n. s., White, 1880, pl. xix, fig. 9 <i>a</i> .....          | 46-47 |
| Subgenus <i>Leucocheila</i> , Albers .....                                         | 47    |
| <i>P. (Leucocheila) incolata</i> , White, 1876, pl. xix, figs. 7 <i>a-c</i> .....  | 47    |
| <i>Egthinella</i> , Moquin-Tandon .....                                            | 48    |
| <i>B. gregaria</i> , Meek, 1871, pl. xix, figs. 6 <i>a, b</i> .....                | 48    |

106.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 4.—Fossils of the Laramie Group. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 49-103, and pls. xx-xxx. Washington, 1883.



Same. Washington, Government Printing Office, 1880. 8vo, pp. 49-103, and pls. xx-xxx. Three hundred separates printed. See remarks following entry No. 104.

The object of this article is to give a list of all the mollusca that were known from the Laramie Group up to the time of publication, and to illustrate those which had not before been illustrated.

*Conchifera.*

|                                                                                                              | Page.  |
|--------------------------------------------------------------------------------------------------------------|--------|
| <i>Ostrea</i> , Linnaeus .....                                                                               | 56     |
| <i>O. glabra</i> , M. & H., 1857 .....                                                                       | 56     |
| <i>Anomia</i> , Linnaeus .....                                                                               | 57     |
| <i>A. gryphorhynchus</i> , Meek, 1872, pl. xxv, figs. 1 <i>c-e</i> .....                                     | 57     |
| <i>A. micronema</i> , Meek, 1875, pl. xxv, figs. 2 <i>a-d</i> .....                                          | 57-58  |
| <i>Volsetta</i> , Scopoli .....                                                                              | 58     |
| Subgenus <i>Brachydontes</i> , Swainson .....                                                                | 58     |
| <i>V. (Brachydontes) regularis</i> , White, 1878, pl. xxv, fig. 3 <i>a</i> .....                             | 58-59  |
| <i>V. (Brachydontes) laticostata</i> , White, 1878, pl. xxv, fig. 4 <i>a</i> .....                           | 59     |
| <i>Azinea</i> , Poli .....                                                                                   | 59     |
| <i>A. holmesiana</i> , n. s., White, 1880, pl. xx, figs. 2 <i>a, b</i> .....                                 | 59-60  |
| <i>Nuculana</i> , Link .....                                                                                 | 60     |
| <i>N. inclara</i> , White, 1878, pl. xxv, fig. 7 <i>a</i> .....                                              | 60, 61 |
| <i>Anodonta</i> , Cuvier .....                                                                               | 61     |
| <i>A. propatoris</i> , White, 1877, pl. xxiv, figs. 2 <i>a-d</i> .....                                       | 61-62  |
| <i>A. parallela</i> , White, 1878, pl. xxiv, fig. 3 <i>a</i> .....                                           | 62     |
| <i>Unio</i> , Retzius .....                                                                                  | 62     |
| <i>U. aldrichi</i> , White, 1878, pl. xxix, figs. 2 <i>a, b</i> .....                                        | 62-63  |
| <i>U. gonimbonatus</i> , White, 1878, pl. xxix, figs. 1 <i>a, b</i> .....                                    | 63-64  |
| <i>U. brachyopisthus</i> , White, 1876, pl. xxii, figs. 2 <i>a, b</i> .....                                  | 64     |
| <i>U. cuneis</i> , White, 1877, pl. xxvii, fig. 1 <i>a</i> .....                                             | 64, 65 |
| <i>U. propheticus</i> , White, 1876, pl. xxii, fig. 5 <i>a</i> .....                                         | 65     |
| <i>U. proanitus</i> , White, 1877, pl. xxii, figs. 3 <i>a-d</i> .....                                        | 65-66  |
| <i>U. endlichi</i> , White, 1877, pl. xxvi, figs. 1 <i>a, b</i> .....                                        | 66-67  |
| <i>U. holmesianus</i> , White, 1877, pl. xxii, figs. 4 <i>a-e</i> .....                                      | 67-68  |
| <i>U. dani</i> , M. & H., pl. xxvii, figs. 2 <i>a, b</i> .....                                               | 68     |
| <i>U. cryptorhynchus</i> , White, 1877, pl. xxiv, figs. 1 <i>a, b</i> .....                                  | 68-69  |
| <i>U. senectus</i> , White, 1877, pl. xxviii, figs. 1 <i>a-c</i> .....                                       | 69     |
| <i>U. primævus</i> , White, 1877, pl. xxix, figs. 3 <i>a, b</i> .....                                        | 70     |
| <i>U. priscus</i> , M. & H. ....                                                                             | 70     |
| <i>U. subspatulatus</i> , M. & H. ....                                                                       | 71     |
| <i>U. deweyanus</i> , M. & H. ....                                                                           | 71     |
| <i>U. vetustus</i> , Meek .....                                                                              | 71     |
| <i>U. belliplicatus</i> , Meek .....                                                                         | 71     |
| <i>U. gonionotus</i> , White, 1876, pl. xxvi, figs. 2 <i>a-e</i> .....                                       | 71-72  |
| <i>Sphærium</i> , Scopoli .....                                                                              | 72     |
| <i>S. planum</i> , M. & H. ....                                                                              | 72     |
| <i>S. recticardinale</i> , M. & H. ....                                                                      | 72     |
| <i>S. formosum</i> , M. & H. ....                                                                            | 72     |
| <i>S. subellipticum</i> , M. & H. ....                                                                       | 72     |
| <i>Corbicula</i> , Megerle .....                                                                             | 72     |
| <i>C. obesa</i> , White, 1878, pl. xxiii, figs. 3 <i>a-e</i> .....                                           | 72-73  |
| <i>C. cardiniæformis</i> , White, 1878, pl. xxv, figs. 5 <i>a, b</i> .....                                   | 73     |
| <i>C. cleburni</i> , White, 1878, pl. xxiii, figs. 1 <i>a-c</i> .....                                        | 73-74  |
| <i>C. cytheriformis</i> , M. & H., pl. xxi, figs. 4 <i>a-d</i> .....                                         | 74     |
| <i>C. nebrascensis</i> , M. & H. ....                                                                        | 74     |
| <i>C. occidentalis</i> , M. & H., 1856, pl. xxi, figs. 3 <i>a-e</i> .....                                    | 75     |
| Subgenus <i>Leptesthes</i> , Meek .....                                                                      | 75     |
| <i>C. (Leptesthes) fracta</i> , Meek, 1871, pl. xxiii, figs. 2 <i>a-e</i> and pl. xxi, fig. 5 <i>a</i> ..... | 75-77  |
| <i>C. (Leptesthes) planumbona</i> , Meek, 1875, pl. xxi, figs. 2 <i>a-d</i> .....                            | 77-78  |
| <i>C. (Leptesthes) macropistha</i> , White, 1878, pl. xxiii, figs. 4 <i>a-f</i> .....                        | 78-79  |
| <i>C. (Leptesthes) subelliptica</i> , M. & H. ....                                                           | 79     |
| Subgenus <i>Veloritina</i> , Meek .....                                                                      | 79     |
| <i>C. (Veloritina) durkeei</i> , Meek .....                                                                  | 79-80  |
| <i>Corbula</i> , Bruguière .....                                                                             | 80     |
| <i>C. subtrigonalis</i> , M. & H. ....                                                                       | 80     |
| <i>C. perovata</i> , M. & H. ....                                                                            | 80     |
| <i>C. crassatelliformis</i> , Meek .....                                                                     | 80     |
| <i>C. tropidophora</i> , Meek .....                                                                          | 80     |

|                                                                                              | Page. |
|----------------------------------------------------------------------------------------------|-------|
| <i>O. mactriformis</i> , M. & H .....                                                        | 80    |
| <i>O. undifera</i> , Meek, 1873, pl. xxix, figs. 4 <i>a-f</i> .....                          | 80-81 |
| <i>O. undifera</i> var. <i>subundifera</i> , White, 1880, pl. xxix, figs. 5 <i>a-c</i> ..... | 81-82 |
| <i>O. pyriformis</i> , Meek .....                                                            | 82    |
| <i>Gasteropoda.</i>                                                                          |       |
| <i>Rhytrophorus</i> , Meek .....                                                             | 82    |
| <i>R. priscus</i> , Meek .....                                                               | 82    |
| <i>R. meekii</i> , n. s., White, 1880, pl. xxx, figs. 8 <i>a, b</i> .....                    | 82-83 |
| <i>Aerolorus</i> , Beck .....                                                                | 83    |
| <i>A. minutus</i> , M. & H .....                                                             | 83    |
| <i>Planorbis</i> , Müller .....                                                              | 83    |
| <i>P. convolutus</i> , M. & H .....                                                          | 83    |
| Subgenus <i>Bathyomphalus</i> , Agassiz .....                                                | 83    |
| <i>P. (Bathyomphalus) amplexus</i> , M. & H .....                                            | 83    |
| <i>P. (Bathyomphalus) planoconvexus</i> , M. & H .....                                       | 83    |
| <i>Limnaea</i> , Lamarek .....                                                               | 84    |
| <i>L. nitidula</i> , Meek .....                                                              | 84    |
| Subgenus <i>Pleurolimnaea</i> , Meek .....                                                   | 84    |
| <i>L. (Pleurolimnaea) tenuicostata</i> , M. & H .....                                        | 84    |
| <i>Acella</i> , Haldeman .....                                                               | 84    |
| <i>A. haldemani</i> , White, 1878, pl. xxx, figs. 9 <i>a, b</i> .....                        | 84    |
| <i>Physa</i> , Draparnaud .....                                                              | 84    |
| <i>P. felix</i> , White, 1878, pl. xxii, fig. 1 <i>a</i> .....                               | 84-85 |
| <i>P. copri</i> , White, 1877, pl. xxiv, figs. 4 <i>a, b</i> .....                           | 85    |
| <i>Physa</i> ——— ? White, 1880, pl. xxx, fig. 11 <i>a</i> .....                              | 85    |
| <i>Balinus</i> , Adanson .....                                                               | 86    |
| <i>B. atavus</i> , White, 1877, pl. xxiv, figs. 5 <i>a, b</i> .....                          | 86    |
| <i>B. disjunctus</i> , White, 1879, pl. xxiv, figs. 6 <i>a, b</i> .....                      | 86-87 |
| <i>B. longiusculus</i> , M. & H .....                                                        | 87    |
| <i>B. ? rhomboides</i> , M. & H .....                                                        | 87    |
| <i>B. subelongatus</i> , M. & H .....                                                        | 87    |
| <i>Vitrina</i> , Draparnaud .....                                                            | 87    |
| <i>V. ? obliqua</i> , M. & H .....                                                           | 87    |
| <i>Hyalina</i> , Férussac .....                                                              | 87    |
| <i>H. ? occidentalis</i> , M. & H .....                                                      | 87    |
| <i>H. ? evansi</i> , M. & H .....                                                            | 87-88 |
| <i>Helix</i> , Linnaeus .....                                                                | 88    |
| <i>H. retusta</i> , M. & H .....                                                             | 88    |
| <i>Thaumatostus</i> , Albers .....                                                           | 88    |
| <i>T. limnaeiformis</i> , M. & H .....                                                       | 88    |
| <i>Columna</i> , Perry .....                                                                 | 88    |
| <i>C. teres</i> , M. & H .....                                                               | 88    |
| <i>C. vermicula</i> , M. & H .....                                                           | 88    |
| <i>Neritina</i> , Lamarek .....                                                              | 88    |
| <i>N. volvilineata</i> , White, 1876, pl. xxi, figs. 6 <i>a, b</i> .....                     | 88-89 |
| <i>N. naticiformis</i> , White, 1878, pl. xxx, figs. 3 <i>a, b</i> .....                     | 89    |
| Subgenus <i>Velatella</i> , Meek .....                                                       | 89    |
| <i>N. (Velatella) baptista</i> , White, 1878, pl. xxix, figs. 6 <i>a, b</i> .....            | 89-90 |
| <i>Cerithiidea</i> , Swainson .....                                                          | 90    |
| Subgenus <i>Pirenella</i> , Gray .....                                                       | 90    |
| <i>C. (Pirenella) nebrascensis</i> , M. & H .....                                            | 90    |
| <i>Goniobasis</i> , Lea .....                                                                | 90    |
| <i>G. cleburni</i> , White, 1876, pl. xxx, figs. 4 <i>a-d</i> .....                          | 91    |
| <i>G. chrysallis</i> , Meek, 1871, pl. xxx, figs. 6 <i>a, b</i> .....                        | 91-92 |
| <i>G. chrysalloidea</i> , White, 1876, pl. xxx, figs. 5 <i>a, b</i> .....                    | 92    |
| <i>G. eudlichi</i> , White, 1878, pl. xxx, figs. 7 <i>a-c</i> .....                          | 92-93 |
| <i>G. macilenta</i> , White, 1879, pl. xxx, fig. 10 <i>a</i> .....                           | 93    |
| <i>G. gracilenta</i> , M. & H .....                                                          | 94    |
| <i>G. convexa</i> , M. & H .....                                                             | 94    |
| <i>G. inrenusta</i> , M. & H .....                                                           | 94    |
| <i>G. sublaevis</i> , M. & H .....                                                           | 94    |
| <i>G. ? omitta</i> , M. & H .....                                                            | 94    |
| <i>G. ? subtoruosa</i> , M. & H .....                                                        | 94    |
| <i>G. nebrascensis</i> , M. & H .....                                                        | 94    |

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| <i>G. tenuicarinata</i> , M. & H. ....                               | 94      |
| <i>Melania</i> , Lamareck .....                                      | 94      |
| <i>M. ? insculpta</i> , Meek, 1873, pl. xx, fig. 4 a .....           | 94-95   |
| <i>M. wyomingensis</i> , Meek, 1873, pl. xxviii, figs. 6 a, b .....  | 95-96   |
| <i>Pyrgulifera</i> , Meek .....                                      | 96      |
| <i>P. humerosa</i> , Meek .....                                      | 96      |
| <i>Cassiopella</i> , White .....                                     | 96-97   |
| <i>C. turricula</i> , White, 1876, pl. xxvii, figs. 3 a-g .....      | 97      |
| <i>Hydrobia</i> , Hartmann .....                                     | 97      |
| <i>H. anthonyi</i> , M. & H. ....                                    | 97      |
| <i>H. warrenana</i> , M. & H. ....                                   | 97      |
| <i>H. subconica</i> , M. & H. ....                                   | 97      |
| <i>H. ? culimoides</i> , M. & H. ....                                | 97      |
| <i>Micropyrgus</i> , Meek .....                                      | 98      |
| <i>M. minutulus</i> , M. & H. ....                                   | 98      |
| <i>Viviparus</i> , Montfort .....                                    | 98      |
| <i>V. plicapressus</i> , White, 1876, pl. xxviii, figs. 3 a, b ..... | 98      |
| <i>V. prudentius</i> , White, 1878, pl. xxviii, figs. 5 a, b .....   | 98-99   |
| <i>V. couesi</i> , White, 1878, pl. xxx, fig. 1 a .....              | 99      |
| <i>V. lei</i> , M. & H. ....                                         | 100     |
| <i>V. retusus</i> , M. & H. ....                                     | 100     |
| <i>V. peculiaris</i> , M. & H. ....                                  | 100     |
| <i>V. trochiformis</i> , M. & H. ....                                | 100     |
| <i>V. reynoldsianus</i> , M. & H. ....                               | 100     |
| <i>V. leidy</i> , M. & H. ....                                       | 100     |
| <i>V. conradi</i> , M. & H. ....                                     | 100     |
| <i>Tulotoma</i> , Haldeman .....                                     | 100     |
| <i>T. thompsoni</i> , White, 1876, pl. xxviii, figs. 2 a-h .....     | 100-101 |
| <i>Campeloma</i> , Rafinesque .....                                  | 101     |
| <i>C. vetula</i> , M. & H. ....                                      | 101     |
| <i>C. multistriata</i> , M. & H. ....                                | 101     |
| <i>C. multilineata</i> , M. & H. ....                                | 101     |
| <i>C. macrospira</i> , Meek, pl. xxx, fig. 2 a .....                 | 102     |
| <i>Valvata</i> , Müller .....                                        | 102     |
| <i>V. subumbilicata</i> , M. & H. ....                               | 102     |
| <i>V. parvula</i> , M. & H. ....                                     | 102     |
| <i>V. ? montanaensis</i> , Meek .....                                | 102     |
| <i>Odontobasis</i> , Meek .....                                      | 102     |
| <i>O. buccinoides</i> , White, 1876, pl. xx, figs. 3 a, b .....      | 102-103 |
| <i>O. ? formosa</i> , White, 1878, pl. xxviii, fig. 7 a .....        | 103     |

## 107.

- WHITE, C. A. Contributions to Invertebrate Paleontology, No. 5. Triassic Fossils of Southeastern Idaho. <Twelfth Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 105-118, pls. xxxi-xxxii. Washington, 1883.
- Same. Washington: Government Printing Office, 1880, 8vo, pp. 105-118, pls. xxxi-xxxii. Three hundred separates printed. See remarks following entry No. 93.

This article is essentially a republication of Paleontological paper No. 9. (See entry No. 71.)

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>Brachiopoda.</i>                                                 |         |
| <i>Terebratula</i> , Lillwyd .....                                  | 108     |
| <i>T. semisimplex</i> , White, 1879, pl. xxxi, figs. 3 a-c .....    | 108-109 |
| <i>T. augusta</i> , H. & Whitf. ? .....                             | 109     |
| <i>Conchifera.</i>                                                  |         |
| <i>Ariculopecten</i> , McCoy .....                                  | 109     |
| <i>A. ? pealei</i> , White, 1879, pl. xxxii, fig. 4 a .....         | 109-110 |
| <i>A. ? altus</i> , White, 1879, pl. xxxii, fig. 3 a .....          | 110     |
| <i>A. ? idahoensis</i> , Meek, 1872, pl. xxxii, fig. 2 a .....      | 110-111 |
| <i>Cephalopoda.</i>                                                 |         |
| <i>Meekoceras</i> , Hyatt .....                                     | 112     |
| <i>M. ap[lan]at[um]</i> , White, 1879, pl. xxxi, figs. 1 a-d .....  | 112-113 |
| <i>M. mushbachianum</i> , White, 1879, pl. xxxii, figs. 1 a-d ..... | 114     |

|                                                                          | Page.   |
|--------------------------------------------------------------------------|---------|
| <i>M. gracilitatis</i> , White, 1879, pl. xxxi, figs. 2 <i>a-d</i> ..... | 115-116 |
| <i>M. gracilitatis</i> var., White, 1880 .....                           | 116     |
| <i>Arcestes</i> , Suess .....                                            | 116     |
| <i>A. ? cirratus</i> , White, 1879 .....                                 | 116-117 |
| <i>Arcestes</i> ——— ? White? 1880 .....                                  | 117-118 |

108.

WHITE, C. A. Contributions to Invertebrate Paleontology, No. 6.—Certain Carboniferous Fossils from the Western States and Territories. <Twelfth Annual Report U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 119-141, and pls. xxxiii-xxxvi. Washington, 1883.

Same. Washington: Government Printing Office, 1883. 8vo, pp. 119-141, and pls. xxxiii-xxxvi. Three hundred separates printed. See remarks following entry No. 104.

Twenty-seven species of fossils are described and illustrated, all of which had been previously published.

|                                                                                                              | Page.   |
|--------------------------------------------------------------------------------------------------------------|---------|
| <i>Actinozoa.</i>                                                                                            |         |
| <i>Amplexus</i> , Sowerby .....                                                                              | 120     |
| <i>A. zaplerutiformis</i> , White, 1876, pl. xxxiii, figs. 1 <i>a-d</i> .....                                | 120     |
| <i>Aecularia</i> , Schweigger .....                                                                          | 120     |
| <i>A. adjunctiva</i> , White, 1880, pl. xxxv, figs. 1 <i>a-d</i> .....                                       | 120-121 |
| <i>Leptopora</i> , Winchell .....                                                                            | 121     |
| <i>L. winchelli</i> , White, 1879, pl. xxxiv, fig. 11 <i>a</i> .....                                         | 121-122 |
| <i>Echinodermata.</i>                                                                                        |         |
| <i>Platycrinus</i> , Miller .....                                                                            | 122     |
| <i>P. haydeni</i> , Meek, 1873, pl. xxxiii, fig. 7 <i>a</i> .....                                            | 122-123 |
| <i>Leptocrinus</i> , White .....                                                                             | 123     |
| <i>L. olliculaformis</i> , White, 1880, pl. xxxv, figs. 2 <i>a, b</i> .....                                  | 124     |
| <i>Eupachycrinus</i> , M. & W. ....                                                                          | 124     |
| <i>E. platybasis</i> , White, 1876, pl. xxxiii, fig. 8 <i>a</i> .....                                        | 124-125 |
| <i>Cyathocrinus</i> , Miller .....                                                                           | 125     |
| <i>C. stillatus</i> , White, 1880, pl. xxxv, figs. 3 <i>a, b</i> .....                                       | 125     |
| <i>Eriocrinus</i> , M. & W. ....                                                                             | 126     |
| <i>E. typus</i> , M. & W., 1866, pl. xxxiii, fig. 5 <i>a</i> .....                                           | 126-127 |
| <i>E. (Ceriocrinus) planus</i> , White, 1880, pl. xxxv, figs. 5 <i>a, b</i> .....                            | 127-128 |
| <i>E. (Ceriocrinus) inflexus</i> , Geinitz, 1866, pl. xxxiv, figs. 9 <i>a, b</i> .....                       | 128     |
| <i>Poteriocrinus</i> , Miller .....                                                                          | 128     |
| <i>P. montanaensis</i> , Meek, 1873, pl. xxxiii, fig. 6 <i>a</i> .....                                       | 128-129 |
| <i>Rhodoocrinus</i> , Miller .....                                                                           | 129     |
| <i>R. vespertalis</i> , White, 1880, pl. xxxv, figs. 4 <i>a, b</i> .....                                     | 129-130 |
| <i>Archaeocidaris</i> , McCoy .....                                                                          | 130     |
| <i>A. cratis</i> , White, 1876, pl. xxxiii, fig. 2 <i>a</i> .....                                            | 130     |
| <i>A. dinimii</i> , White, 1880, pl. xxxv, figs. 6 <i>a-c</i> .....                                          | 131     |
| <i>Polyzoa.</i>                                                                                              |         |
| <i>Ptilodietia</i> , Lonsdale .....                                                                          | 131     |
| <i>P. triangulata</i> , White, 1878, pl. xxxiii, figs. 3 <i>a-c</i> .....                                    | 131-132 |
| <i>Brachiopoda.</i>                                                                                          |         |
| <i>Productus</i> , Sowerby .....                                                                             | 132     |
| <i>P. giganteus</i> , Martin, pl. xxxvi, figs. 1 <i>a-c</i> .....                                            | 132     |
| <i>Rhynchonella</i> , Fischer .....                                                                          | 133     |
| <i>R. endlichii</i> , Meek, 1875, pl. xxxiii, figs. 4 <i>a, b</i> , and pl. xxxvi, figs. 2 <i>a, b</i> ..... | 133-134 |
| <i>Rozia</i> , King .....                                                                                    | 134     |
| <i>R. woosteri</i> , White, 1879, pl. xxxiv, figs. 8 <i>a, b</i> .....                                       | 134     |
| <i>Spirifer</i> , Sowerby .....                                                                              | 135     |
| <i>S. agelinius</i> , Meek, 1873, pl. xxxiv, figs. 10 <i>a, b</i> .....                                      | 135     |
| <i>Conchifera.</i>                                                                                           |         |
| <i>Nucula</i> , Lamarck .....                                                                                | 136     |
| <i>N. perumbonata</i> , White, 1879, pl. xxxiv, figs. 7 <i>a, b</i> .....                                    | 136     |
| <i>Nuculana</i> , Link .....                                                                                 | 136     |
| <i>N. obesa</i> , White, 1879, pl. xxxiv, figs. 2 <i>a-c</i> .....                                           | 136-137 |
| <i>Alorisma</i> , King .....                                                                                 | 137     |
| <i>A. ? gilberti</i> , White, 1879, pl. xxxiii, figs. 9 <i>a, b</i> .....                                    | 137-138 |



|                                                                             | Page.   |
|-----------------------------------------------------------------------------|---------|
| <i>Gasteropoda.</i>                                                         |         |
| <i>Bellerophon</i> , Montfort.....                                          | 138     |
| <i>B. subpapillosus</i> , White, 1879, pl. xxxiv, fig. 3 a.....             | 138     |
| <i>Naticopsis</i> , McCoy.....                                              | 139     |
| <i>N. remex</i> , White, 1876, pl. xxxiv, fig. 6 a.....                     | 139     |
| <i>Murchisonia</i> , d'Archiac.....                                         | 139     |
| <i>M. terebra</i> , White, 1879, pl. xxxiv, fig. 4 a.....                   | 139-140 |
| <i>Pleurotomaria</i> , DeFrance.....                                        | 140     |
| <i>P. taggerti</i> , Meek, 1874, pl. xxxiv, figs. 1 a, b.....               | 140     |
| <i>P. grayvillensis</i> , Norwood & Pratten, 1855, pl. xxxiv, fig. 5 a..... | 140-141 |

## 109.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 7. Jurassic Fossils from the Western Territories. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878), pp. 143-153, pls. xxxvii-xxxviii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 143-153, and plates xxxvii-xxxviii. Three hundred separates printed. See remarks following entry No. 93.

Sixteen species are described and figured, part of which are new, and the genus *Lyosoma* is diagnosed.

|                                                                                     | Page    |
|-------------------------------------------------------------------------------------|---------|
| <i>Camptonectes</i> (Agassiz), Meek.....                                            | 143     |
| <i>C. platessiformis</i> , White, 1876, pl. xxxvii, fig. 5 a.....                   | 143-144 |
| <i>Ariculopecten</i> , McCoy.....                                                   | 144     |
| <i>A. ? superstrictus</i> , n. s., White, 1880, pl. xxxvii, figs. 4 a, b.....       | 144     |
| <i>Gervillia</i> , DeFrance.....                                                    | 145     |
| <i>G. montanaensis</i> , Meek, 1873, pl. xxxvii, figs. 1 a, b.....                  | 145     |
| <i>Volcella</i> , Scopoli.....                                                      | 145     |
| <i>V. subimbricata</i> , Meek, 1873, pl. xxxvii, figs. 2 a-c.....                   | 145-146 |
| <i>V. (Modiolina) platynota</i> , n. s., White, 1880, pl. xxxvii, figs. 3 a, b..... | 146-147 |
| <i>Mytilus</i> , Linnaeus.....                                                      | 147     |
| <i>M. whitei</i> , Whitfield, 1877, pl. xxxvii, fig. 9 a.....                       | 147     |
| <i>Trigonia</i> , Bruguière.....                                                    | 147     |
| <i>T. montanaensis</i> , Meek, 1873, pl. xxxviii, fig. 2 a.....                     | 147-148 |
| <i>T. americana</i> , Meek, 1873, pl. xxxviii, figs. 1 a, b.....                    | 148     |
| <i>Astarte</i> , Sowerby.....                                                       | 149     |
| <i>A. packardi</i> , n. s., White, 1880, pl. xxxvii, figs. 6 a, b.....              | 149     |
| <i>Cardinia</i> , Agassiz.....                                                      | 149     |
| <i>C. precisa</i> , n. s., White, 1880, pl. xxxvii, figs. 7 a, b.....               | 149-150 |
| <i>Tancredia</i> , Lyeett.....                                                      | 150     |
| <i>T. extensa</i> , White, 1880, pl. xxxviii, fig. 4 a.....                         | 150     |
| <i>Pholadomya</i> , Sowerby.....                                                    | 150     |
| <i>P. kingii</i> , Meek, 1873, pl. xxxviii, figs. 3 a, b.....                       | 150-151 |
| <i>Goniomya</i> , Agassiz.....                                                      | 151     |
| <i>G. montanaensis</i> , Meek, 1873, pl. xxxvii, fig. 8 a.....                      | 151     |
| <i>Myacites</i> (Schlotheim), Munster.....                                          | 151     |
| <i>M. subcompressus</i> , Meek, 1873, pl. xxxviii, figs. 5 a-e.....                 | 151-152 |
| * <i>Lyosoma</i> , n. g., White, 1880.....                                          | 152-153 |
| <i>L. powelli</i> , White, 1876, pl. xxxviii, figs. 6 a-d.....                      | 153     |

## 110.

WHITE, C. A. Contributions to Invertebrate Paleontology No. 8. Fossils from the Carboniferous Rocks of the Interior States. <Twelfth Annual Report of the U. S. Geol. and Geog. Surv. of the Terr. (for the year 1878). pp. 155-171, pls. xxxix-xlii. Washington, 1883.

Same. Washington: Government Printing Office, 1880. 8vo, pp. 155-171, and plates xxxix-xlii. Three hundred separates printed. See remarks following entry No. 93. The series of contributions closes with No. 8, and it is not again resumed in that form.

Twenty-eight species are described and figured, part of which are new.

\* λυω, to loosen, and σωμα, the body.

|                                                                                                   | Page.   |
|---------------------------------------------------------------------------------------------------|---------|
| <i>Radiata.</i>                                                                                   |         |
| <i>Actinaria.</i>                                                                                 |         |
| <i>Zaphrentis</i> , Rafinesque.....                                                               | 155     |
| <i>Z. elliptica</i> , White, 1862, pl. xxxix, figs. 4 <i>a</i> , <i>b</i> .....                   | 155-156 |
| <i>Z. calceola</i> , White & Whitf., 1862, pl. xxxix, figs. 6 <i>a-d</i> .....                    | 156     |
| <i>Hadrophyltum</i> , Edwards & Haine.....                                                        | 156     |
| <i>H. glans</i> , White, 1862, pl. xxxix, figs. 5 <i>a</i> , <i>b</i> .....                       | 156-157 |
| <i>Lophophyltum</i> , Edwards & Haine.....                                                        | 157     |
| <i>L. expansum</i> , White, 1876, pl. xxxix, figs. 4 <i>a</i> , <i>b</i> .....                    | 157     |
| <i>Chonophyltum</i> , Edwards & Haine.....                                                        | 157     |
| <i>C. sedaliense</i> , n. s., White, 1880, pl. xxxix, fig. 1 <i>a</i> .....                       | 157     |
| <i>Michilinia</i> , De Koninck.....                                                               | 157     |
| <i>M. ? placenta</i> , n. s., White, 1880, pl. xxxix, figs. 1 <i>a-d</i> .....                    | 157-158 |
| <i>M. expansa</i> , n. s., White, 1880, pl. xxxix, figs. 2 <i>a</i> , <i>b</i> .....              | 158     |
| <i>Lithostrotion</i> , Fleming.....                                                               | 159     |
| <i>L. microstylum</i> , n. s., White, 1880, pl. xl, fig. 7 <i>a</i> .....                         | 159     |
| <i>L. mamillare</i> , Castelnau, pl. xl, figs. 6 <i>a</i> , <i>b</i> .....                        | 159-160 |
| <i>Echinodermata.</i>                                                                             |         |
| <i>Platyerinus</i> , Miller.....                                                                  | 160     |
| <i>P. bonoensis</i> , White, 1878, pl. xl, fig. 5 <i>a</i> .....                                  | 160-161 |
| <i>Scaphiocrinus</i> , Hall.....                                                                  | 161     |
| <i>S. gibsoni</i> , White, 1878, pl. xl, fig. 4 <i>a</i> .....                                    | 161-162 |
| <i>S. gurleyi</i> , White, 1878, pl. xl, fig. 3 <i>a</i> .....                                    | 162     |
| <i>Actinocrinus</i> , Miller.....                                                                 | 162     |
| <sup>2</sup> <i>A. wachsmuthi</i> , n. s., White, 1880, pl. xl, figs. 1 <i>a</i> , <i>b</i> ..... | 162-163 |
| <i>Lepidesthes</i> , M. & W.....                                                                  | 163     |
| <i>L. colleti</i> , White, 1878, pl. xl, figs. 2 <i>a</i> , <i>b</i> .....                        | 163-164 |
| <i>Mollusca.</i>                                                                                  |         |
| <i>Molluscoidea.</i>                                                                              |         |
| <i>Brachiopoda.</i>                                                                               |         |
| <i>Orthis</i> , Dalman.....                                                                       | 164     |
| <i>O. thiemei</i> , White, 1860, pl. xli, figs. 4 <i>a-d</i> .....                                | 164-165 |
| <i>Rhynchonella</i> , Fischer.....                                                                | 165     |
| <i>R. otumwa</i> , White, 1862, pl. xli, figs. 5 <i>a-c</i> .....                                 | 165     |
| <i>Spirifer</i> , Sowerby.....                                                                    | 165     |
| <i>S. subcardiiformis</i> , Hall, 1858, pl. xli, figs. 2 <i>a-c</i> .....                         | 165-166 |
| <i>Mollusca, vera.</i>                                                                            |         |
| <i>Conchifera.</i>                                                                                |         |
| <i>Anthracopectera</i> , Salter.....                                                              | 166     |
| <i>A. polita</i> , n. s., White, 1880, pl. xlii, figs. 5 <i>a</i> , <i>b</i> .....                | 166     |
| <i>Astartella</i> , Hall.....                                                                     | 166     |
| <i>A. gurleyi</i> , White, 1878, pl. xlii, figs. 6 <i>a</i> , <i>b</i> .....                      | 166-167 |
| <i>Allorisma</i> , King.....                                                                      | 167     |
| <i>A. marionensis</i> , White, 1876, pl. xli, figs. 1 <i>a</i> , <i>b</i> .....                   | 167-168 |
| <i>Gasteropoda.</i>                                                                               |         |
| <i>Euomphalus</i> , Sowerby.....                                                                  | 167     |
| <i>E. springvalensis</i> , White, 1876, pl. xli, figs. 1 <i>a</i> , <i>b</i> .....                | 167-168 |
| <i>Platyceras</i> , Conrad.....                                                                   | 168     |
| <i>P. tribulosum</i> , n. s., White, 1880, pl. xli, figs. 6 <i>a</i> , <i>b</i> .....             | 168     |
| <i>Naticopsis</i> , McCoy.....                                                                    | 168     |
| <i>N. monilifera</i> , n. s., White, 1880, pl. xlii, figs. 3 <i>a-c</i> .....                     | 168     |
| <i>Pleurotomaria</i> , DeFrance.....                                                              | 169     |
| <i>P. broadheadi</i> , n. s., White, 1880, pl. xlii, figs. 1 <i>a</i> , <i>b</i> .....            | 169     |
| <i>P. newportensis</i> , n. s., White, 1880, pl. xlii, figs. 2 <i>a</i> , <i>b</i> .....          | 169     |
| <i>Pteropoda.</i>                                                                                 |         |
| <i>Conularia</i> , Miller.....                                                                    | 170     |
| <i>C. crustula</i> , n. s., White, 1880, pl. xlii, fig. 4 <i>a</i> .....                          | 170     |
| <i>Cephalopoda.</i>                                                                               |         |
| <i>Nautilus</i> , Breynius.....                                                                   | 170     |
| <i>N. danvillensis</i> , White, 1878, pl. xlii, fig. 7 <i>a</i> .....                             | 170-171 |
| <i>Articulata.</i>                                                                                |         |
| <i>Vermes.</i>                                                                                    |         |
| <i>Serpula</i> , Linnaeus.....                                                                    | 171     |
| <i>S. insita</i> , White, 1878, pl. xlii, fig. 8 <i>a</i> .....                                   | 171     |

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WHITE, C. A. Forestry in the Great Prairie Region. <American Journal of Forestry, vol. i (May No.), pp. 366-370. Cincinnati, 1883.

Same. Cincinnati, 1883. 8vo, pp. 1-6. Forty separates printed without title-page, or covers, but repaged.

This Journal was started at the beginning of 1883, with Dr. F. B. Hough as editor and Robert Clarke & Co. as publishers. It was published one year and then discontinued.

## 112.

WHITE, C. A. The reversion of Sunflowers at night. <Nature. 4to, vol. [xxvii?] p. 241. London and New York, 1883.

Sunflowers are observed to turn to the eastward immediately after dark.

## 113.

WHITE, C. A. New Molluscan forms from the Laramie and Green River groups; with discussion of some associated forms heretofore known. <Proc. U. S. National Museum, vol. v, pp. 94-99, pls. i-ii. Washington, 1883.

Same. Washington: Government Printing Office, 1882. 8vo, pp. 94-99, and two plates. One hundred and fifty separates printed, together with the paper of the next entry, without title-page, covers, or repaging.

Six species are described and figured as new; and *Paramelania*, Smith, is figured and compared with *Pyrgulifera*, Meek. Also the discovery of the under valve of *Anomia micronema* is announced and figured; and the prismatic structure of that valve suggested as the cause that it has so generally been destroyed.

|                                                                           | Page. |
|---------------------------------------------------------------------------|-------|
| <i>Unio</i> , Retzius .....                                               | 94    |
| <i>U. clinopisthus</i> , n. s., White, 1882, pl. iii, figs. 1 and 2 ..... | 94    |
| <i>Corbicula</i> , Mühlfeldt .....                                        | 94    |
| <i>C. berthoudi</i> , n. s., White, 1882, pl. iv, figs. 1-3 .....         | 94-95 |
| <i>C. augheyi</i> , n. s., White, 1882, pl. iv, figs. 4-6 .....           | 95    |
| <i>Neritina</i> , Lamarck .....                                           | 95    |
| <i>N. bruneri</i> , n. s., White, 1882, pl. iv, figs. 7 and 8 .....       | 95-96 |
| <i>Melanopsis</i> , Lamarck .....                                         | 96    |
| <i>M. americana</i> , n. s., White, 1882, pl. iv, figs. 9 and 10 .....    | 96    |
| <i>Campeloma</i> , Rafinesque .....                                       | 97    |
| <i>C. producta</i> , n. s., White, 1882, pl. iii, figs. 7-9 .....         | 97    |

## 114.

WHITE, C. A. The Molluscan Fauna of the Truckee Group, including a new form. <Proc. U. S. National Museum, vol. v, pp. 99-101, pl. i. Washington, 1883.

Same. Washington: Government Printing Office, 1882. 8vo, pp. 99-101, and one plate. One hundred and fifty separates printed, together with the paper of the last entry, without title-page, covers, or repaging.

Nine species are figured, which constitute the entire molluscan fauna of the Truckee Group as it was then known to the author. A species of *Latia* is described, which is the only one of that genus yet known in North America.

|                                                                                          | Page.   |
|------------------------------------------------------------------------------------------|---------|
| <i>Melania sculptilis</i> , Meek, pl. v, fig. 1 .....                                    | 100     |
| <i>Melania subsculptilis</i> , Meek, pl. v, fig. 2 .....                                 | 100     |
| <i>Melania taylori</i> , Gabb, pl. v, fig. 3 .....                                       | 100     |
| <i>Lithasia antiqua</i> , Gabb, pl. v, fig. 4 .....                                      | 100     |
| <i>Carinifex</i> ( <i>Vorticifex</i> ) <i>tryoni</i> , Meek, pl. v, figs. 5-7 .....      | 100     |
| <i>Carinifex</i> ( <i>Vorticifex</i> ) <i>binneyi</i> , Meek, pl. v, figs. 8 and 9 ..... | 100     |
| <i>Aneylus undulatus</i> , Meek, pl. v, figs. 10 and 11 .....                            | 100     |
| <i>Sphaerium rugosum</i> , Meek, pl. v, figs. 14-16 .....                                | 100     |
| <i>Sphaerium?</i> <i>idahoense</i> , Meek, pl. v, figs. 12 and 13 .....                  | 100     |
| <i>Latia dallii</i> , n. s., White, 1882, pl. v, figs. 17-20 .....                       | 100-101 |

WHITE, C. A. A Review of the Non-Marine Fossil Mollusca of North America. <Third Annual Report of the Director of the United States Geological Survey to the Secretary of the Interior, 1881-'82. By J. W. Powell, Director, pp. 403-550 and pls. p. i-xxxii. Washington, 1883.

Same. Washington: Government Printing Office, 1883. Imp. 8vo. pp. 1-80 and pls. 1-32. One hundred copies printed early in 1883 with paging, numbering of the plates, and title-page separate from that of the volume.

Same. One hundred more copies printed at the time of the issuance of the volume in 1884.

This memoir contains a discussion of the families which are represented in the brackish and fresh water deposits, an annotated catalogue of all the known species in the order in which the formations occur, general discussion of the conditions which prevailed when the mollusks lived, and the manner in which the lines of descent of a part of them have been continued to the present time. Two hundred and twenty-seven species are noticed, all of which are illustrated. Although the volume of which this work is an extract, bears the date 1883 upon its title-page, the volume, as a whole, was not issued until near the middle of 1884.

[The pagination in the separates is different from that in the volume. Both are referred to.]

| DEVONIAN.                                                              | Page.   |
|------------------------------------------------------------------------|---------|
| <i>Strophites grandaeva</i> , Dawson, pl. i, fig. 1 .....              | 49, 455 |
| <i>Anodonta? angustata</i> (Vanuxem), Hall, pl. i, figs. 2 and 3 ..... | 18, 424 |
| <i>Anodonta? catkillensis</i> (Vanuxem), Hall, pl. i, fig. 4 .....     | 18, 424 |

CARBONIFEROUS.

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| <i>Pupa vetusta</i> , Dawson, pl. ii, figs. 1 and 2 .....            | 50, 456 |
| <i>Dawsonella meeki</i> , Bradley, pl. ii, figs. 3 and 4 .....       | 47, 453 |
| <i>Anthraxopupa ohioensis</i> , Whitfield, pl. ii, figs. 5-8 .....   | 50, 456 |
| <i>Pupa bigsbyi</i> , Dawson, pl. ii, figs. 9 and 10 .....           | 50, 456 |
| <i>Pupa vermillionensis</i> , Bradley, pl. ii, figs. 13 and 14 ..... | 50, 456 |
| <i>Zonites priscus</i> , Dawson, pl. ii, figs. 11 and 12 .....       | 47, 453 |
| <i>Naiadites carbonaria</i> , Dawson, pl. ii, fig. 15 .....          | 19, 425 |
| <i>Naiadites elongata</i> , Dawson, pl. ii, fig. 16 .....            | 19, 425 |
| <i>Naiadites heris</i> , Dawson, pl. ii, fig. 17 .....               | 19, 425 |

JURASSIC AND TRIASSIC. (?)

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| <i>Unio stewardii</i> , White, pl. iii, fig. 1 .....                | 20, 426 |
| <i>Unio nucalis</i> , M. & H., pl. iii, figs. 2-4 .....             | 20, 426 |
| <i>Unio cristonensis</i> , Meek, pl. iii, fig. 5 .....              | 19, 425 |
| <i>Planorbis veteris</i> , M. & H., pl. iii, fig. 6 .....           | 40, 446 |
| <i>Valvata scabrida</i> , M. & H., pl. iii, fig. 7 .....            | 64, 470 |
| <i>Viviparus gillianus</i> , M. & H., pl. iii, fig. 8 .....         | 60, 470 |
| <i>Lioplacodes veteris</i> , M. & H., pl. iii, fig. 9 .....         | 60, 470 |
| <i>Neritina nebrascensis</i> , M. & H., pl. iii, figs. 10, 11 ..... | 51, 457 |

CRETACEOUS.

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| <i>Margaritana nebrascensis</i> , M. & H., pl. iv, figs. 1 and 2 .....   | 21, 427 |
| <i>Cyrena dakotensis</i> , M. & H., pl. iv, figs. 3 and 4 .....          | 30, 436 |
| <i>Physa</i> — ? White, 1879, pl. iv, fig. 5 .....                       | 38, 444 |
| <i>Unio penultimus</i> , Gabb, pl. v, fig. 1 .....                       | 21, 427 |
| <i>Unio hubbardii</i> , Gabb, pl. v, figs. 2 and 3 .....                 | 21, 477 |
| <i>Cyrena carletoni</i> , Meek, pl. v, figs. 4 and 5 .....               | 30, 436 |
| <i>Anomia propatoris</i> , White, pl. v, figs. 6 and 7 .....             | 16, 422 |
| <i>Neritina (Velatella) bellatula</i> , Meek, pl. v, figs. 8 and 9 ..... | 52, 458 |
| <i>Neritina (Velatella) carditoides</i> , Meek, pl. v, fig. 10 .....     | 52, 458 |
| <i>Neritina banisteri</i> , Meek, pl. v, figs. 11 and 12 .....           | 52, 458 |
| <i>Melampus? antiquus</i> , Meek, pl. v, figs. 13-16 .....               | 38, 444 |
| <i>Melampus?</i> — — — — — Meek, 1873, pl. v, fig. 17 .....              | 38, 444 |
| <i>Physa carletoni</i> , Meek, pl. v, fig. 18 .....                      | 43, 449 |
| <i>Valvata nana</i> , Meek, pl. v, figs. 19 and 20 .....                 | 64, 470 |



## BEAR RIVER, LARAMIE.

|                                                                                           | Page.   |
|-------------------------------------------------------------------------------------------|---------|
| <i>Unio bellipticus</i> , Meek, pl. vi, figs. 1-3 .....                                   | 24, 430 |
| <i>Pyrgulifera humerosa</i> , Meek, pl. vi, figs. 4-6 .....                               | 54, 460 |
| <i>Goniobasis cleburni</i> , White, pl. vi, figs. 7-9 .....                               | 56, 462 |
| <i>Goniobasis chrysalloidea</i> , White, pl. vi, figs. 10 and 11 .....                    | 56, 462 |
| <i>Goniobasis macilentia</i> , White, pl. vi, fig. 12 .....                               | 56, 462 |
| <i>Goniobasis chrysalis</i> , Meek, pl. vi, figs. 13 and 14 .....                         | 56, 462 |
| <i>Limnæa</i> ( <i>Limnophysa</i> ) <i>nitidula</i> , Meek, pl. vi, figs. 15 and 16 ..... | 39, 445 |
| <i>Physa</i> ——— ? White, 1880, pl. vi, fig. 17 .....                                     | 43, 449 |
| <i>Limnæa</i> ( <i>Acella</i> ) <i>haldemani</i> , White, pl. vi, figs. 19 and 20 .....   | 39, 445 |
| <i>Unio retustus</i> , Meek, pl. vii, figs. 1-4 .....                                     | 24, 430 |
| <i>Neritina naticiformis</i> , White, pl. vii, figs. 5 and 6 .....                        | 52, 458 |
| <i>Goniobasis endlichi</i> , White, pl. vii, figs. 7-9 .....                              | 57, 463 |
| <i>Viviparus coeueii</i> , White, pl. viii, fig. 1 .....                                  | 61, 467 |
| <i>Rhytrophorus priscus</i> , Meek, pl. viii, figs. 2 and 3 .....                         | 38, 444 |
| <i>Rhytrophorus neekii</i> , White, pl. viii, figs. 4 and 5 .....                         | 38, 444 |
| <i>Campeloma macrospira</i> , Meek, pl. viii, figs. 6 and 7 .....                         | 63, 469 |
| <i>Corbicula</i> ( <i>Veloritina</i> ) <i>durkeei</i> , Meek, pl. viii, figs. 8-11 .....  | 31, 437 |
| <i>Corbicula pyriformis</i> , Meek, pl. viii, figs. 12-16 .....                           | 35, 441 |

## LARAMIE.

|                                                                                               |         |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Ostrea glabra</i> , M. & H., pls. ix-xi, and pl. xii, fig. 1 .....                         | 15, 421 |
| <i>Ostrea subtrigonalis</i> , Evans & Shumard, pl. xii, figs. 2-5 .....                       | 15, 421 |
| <i>Anomia micronema</i> , Meek, pl. xii, figs. 6-11 .....                                     | 16, 422 |
| <i>Anomia gryphorhynchus</i> , Meek, pl. xii, figs. 12-15 .....                               | 16, 422 |
| <i>Folsella</i> ( <i>Brachydontes</i> ) <i>regularis</i> , White, pl. xiii, fig. 1 .....      | 17, 423 |
| <i>Folsella</i> ( <i>Brachydontes</i> ) <i>laticostata</i> , White, pl. xiii, fig. 2 .....    | 17, 423 |
| <i>Unio proanitus</i> , White, pl. xiii, figs. 3-6 .....                                      | 27, 433 |
| <i>Unio gonionotus</i> , White, pl. xiii, figs. 7-10 .....                                    | 27, 433 |
| <i>Unio priscus</i> , M. & H., pl. xiv, fig. 1 .....                                          | 26, 432 |
| <i>Unio subspatulatus</i> , Meek, pl. xiv, figs. 2 and 3 .....                                | 25, 431 |
| <i>Unio primævus</i> , White, pl. xiv, figs. 4 and 5 .....                                    | 26, 432 |
| <i>Unio cryptorhynchus</i> , White, pl. xiv, figs. 6 and 7 .....                              | 25, 431 |
| <i>Unio endlichi</i> , White, pl. xv, figs. 1 and 2 .....                                     | 26, 432 |
| <i>Unio propheticus</i> , White, pl. xv, fig. 3 .....                                         | 27, 433 |
| <i>Unio aldrichi</i> , White, pl. xv, figs. 4, 5 .....                                        | 27, 433 |
| <i>Unio coeueii</i> , White, pl. xvi, fig. 1 .....                                            | 26, 432 |
| <i>Unio holmesianus</i> , White, pl. xvi, figs. 2-6 .....                                     | 27, 433 |
| <i>Unio brachyopisthus</i> , White, pl. xvi, figs. 7 and 8 .....                              | 27, 433 |
| <i>Unio danæ</i> , M. & H., pl. xvii, figs. 1-3 .....                                         | 25, 431 |
| <i>Unio deveyanus</i> , M. & H., pl. xvii, figs. 4 and 5 .....                                | 25, 431 |
| <i>Corbicula occidentalis</i> , M. & H., pl. xvii, figs. 6 and 7, pl. xxiii, figs. 1-6 .....  | 31, 437 |
| <i>Sphærium planum</i> , M. & H., pl. xvii, fig. 8 .....                                      | 33, 439 |
| <i>Sphærium recticardiale</i> , M. & H., pl. xvii, fig. 9 .....                               | 33, 439 |
| <i>S. subellipticum</i> , M. & H., pl. xvii, fig. 10 .....                                    | 33, 439 |
| <i>S. formosum</i> , M. & H., pl. xvii, fig. 11 .....                                         | 33, 439 |
| <i>Unio mendax</i> , White, pl. xviii, figs. 3-5 .....                                        | 27, 433 |
| <i>Unio danæ</i> , M. & H., ? pl. xviii, figs. 1 and 2 .....                                  | 27, 433 |
| <i>Corbula undifera</i> , Meek, pl. xviii, figs. 6-9 .....                                    | 36, 440 |
| <i>Corbula undifera</i> var. <i>subundifera</i> , White, pl. xviii, figs. 10 and 11 .....     | 36, 440 |
| <i>Corbula mactiformis</i> , M. & H., pl. xviii, figs. 12-15 .....                            | 36, 440 |
| <i>Unio senectus</i> , White, pl. xix, figs. 1 and 2 .....                                    | 26, 432 |
| <i>Unio goniambonatus</i> , White, pl. xix, figs. 3 and 4 .....                               | 27, 433 |
| <i>Anodonta parallela</i> , White, pl. xix, fig. 5 .....                                      | 23, 429 |
| <i>Anodonta propatoris</i> , White, pl. xix, figs. 6-9 .....                                  | 23, 429 |
| <i>Corbula subtrigonalis</i> , M. & H., pl. xix, figs. 10-17 .....                            | 36, 442 |
| <i>Corbicula</i> ( <i>Leptesthes</i> ) <i>fracta</i> , Meek, pl. xx, figs. 1-6 .....          | 33, 439 |
| <i>Corbicula cleburni</i> , White, pl. xx, figs. 7-9 .....                                    | 31, 437 |
| <i>Corbicula subelliptica</i> , M. & H., pl. xx, figs. 10 and 11 .....                        | 31, 437 |
| <i>Corbicula nebrascensis</i> , M. & H., pl. xx, figs. 12 and 13 .....                        | 31, 437 |
| <i>Pisidium saginatum</i> , White, pl. xx, figs. 14 and 15 .....                              | 34, 440 |
| <i>Corbicula berthoudi</i> , White, pl. xxi, figs. 1-3 .....                                  | 32, 438 |
| <i>Corbicula angheyi</i> , n. s., White, 1883, pl. xxi, figs. 4-6 .....                       | 32, 438 |
| <i>Corbicula umbonella</i> , Meek, pl. xxi, figs. 7-10 .....                                  | 32, 438 |
| <i>Corbicula</i> ( <i>Leptesthes</i> ) <i>macropistha</i> , White, pl. xxi, figs. 11-14 ..... | 31, 437 |

|                                                                                          | Page.   |
|------------------------------------------------------------------------------------------|---------|
| <i>Corbicula cytheriformis</i> , M. & H., pl. xxii, figs. 1-6.....                       | 31, 437 |
| <i>Corbicula (Leptesthes) planumbona</i> , Meek, pl. xxii, figs. 7-9.....                | 31, 437 |
| <i>Corbicula (Leptesthes) cardiniæformis</i> , White, pl. xxii, figs. 10-15.....         | 31, 437 |
| <i>Corbicula obesa</i> , White, pl. xxiii, figs. 7-11.....                               | 31, 437 |
| <i>Neritina volvilineata</i> , White, pl. xxiii, figs. 12 and 13.....                    | 52, 458 |
| <i>Neritina bruneri</i> , White, pl. xxiii, figs. 14 and 15.....                         | 53, 459 |
| <i>Neritina (Velatella) baptista</i> , White, pl. xxiii, figs. 16-20.....                | 52, 458 |
| <i>Melanopsis americana</i> , n. g., White, 1883, pl. xxiii, figs. 21-23.....            | 55, 461 |
| <i>Limnæa (Pleurolimnæa) tenuicostata</i> , M. & H., pl. xxiii, fig. 24.....             | 39, 445 |
| <i>Cassiopeia turricula</i> , White, pl. xxiii, figs. 25-29.....                         | 58, 464 |
| <i>Viviparus retusus</i> , M. & H., pl. xxiv, figs. 1-3.....                             | 61, 467 |
| <i>Viviparus conradi</i> , M. & H., pl. xxiv, figs. 4-6.....                             | 61, 467 |
| <i>Viviparus leidy</i> , M. & H., pl. xxiv, fig. 7.....                                  | 61, 467 |
| <i>Viviparus leidy</i> var. <i>formosus</i> , M. & H., pl. xxiv, figs. 8 and 9.....      | 61, 467 |
| <i>Viviparus trochiformis</i> , M. & H., pl. xxiv, figs. 10-16.....                      | 61-467  |
| <i>Tulotoma thompsoni</i> , White, pl. xxiv, figs. 17-22.....                            | 61, 467 |
| <i>Viviparus peculiaris</i> , M. & H., pl. xxiv, figs. 23 and 24.....                    | 61, 467 |
| <i>Viviparus plicapressus</i> , White, pl. xxiv, figs. 25 and 26.....                    | 61, 467 |
| <i>Aeroloxus minutus</i> , M. & H., pl. xxiv, fig. 27.....                               | 45, 451 |
| <i>Physa copei</i> , White, pl. xxv, figs. 1 and 2.....                                  | 44, 450 |
| <i>Physa felix</i> , White, pl. xxv, fig. 3.....                                         | 44, 450 |
| <i>Bulinus disjunctus</i> , White, pl. xxv, figs. 4 and 5.....                           | 45, 451 |
| <i>Bulinus atarus</i> , White, pl. xxv, figs. 6 and 7.....                               | 44, 450 |
| <i>Bulinus longiusculus</i> , M. & H., pl. xxv, fig. 8.....                              | 45, 451 |
| <i>Bulinus rhomboideus</i> , M. & H., pl. xxv, fig. 9.....                               | 45, 451 |
| <i>Bulinus subelongatus</i> , M. & H., pl. xxv, figs. 10 and 11.....                     | 44, 450 |
| <i>Helix kanabensis</i> , White, pl. xxv, figs. 12-14.....                               | 48, 454 |
| <i>Columna teres</i> , M. & H., pl. xxv, fig. 15.....                                    | 48, 454 |
| <i>Columna vermicula</i> , M. & H., pl. xxv, fig. 16.....                                | 48, 454 |
| <i>Viviparus prudentius</i> , White, pl. xxv, figs. 17 and 18.....                       | 61, 467 |
| <i>Viviparus panguitchensis</i> , White, pl. xxv, figs. 19-21.....                       | 61, 467 |
| <i>Viviparus reynoldsi</i> , M. & H., pl. xxv, figs. 22 and 23.....                      | 61, 467 |
| <i>Thaumastus linnaei</i> , M. & H., pl. xxv, fig. 24.....                               | 48, 454 |
| <i>Melania wyomingensis</i> , Meek, pl. xxvi, figs. 1-3.....                             | 54, 460 |
| <i>Melania insculpta</i> , Meek, pl. xxvi, figs. 4 and 5.....                            | 54, 460 |
| <i>Goniobasis convexa</i> , M. & H., pl. xxvi, figs. 6 and 7.....                        | 57, 463 |
| <i>Goniobasis convexa</i> var. <i>impressa</i> , M. & H., pl. xxvi, figs. 8 and 9.....   | 57, 463 |
| <i>Goniobasis? omitta</i> , M. & H., pl. xxvi, fig. 10.....                              | 57, 463 |
| <i>Goniobasis tenuicarinata</i> , M. & H., pl. xxvi, fig. 11.....                        | 57, 463 |
| <i>Goniobasis gracilentia</i> , Meek, pl. xxvi, figs. 12 and 13.....                     | 57, 463 |
| <i>Goniobasis nebrascensis</i> , M. & H., pl. xxvi, figs. 15 and 16.....                 | 57, 463 |
| <i>Goniobasis invenusta</i> , M. & H., pl. xxvi, fig. 17.....                            | 57, 463 |
| <i>Goniobasis subleris</i> , M. & H., pl. xxvi, fig. 18.....                             | 57, 463 |
| <i>Limnæa? compactilis</i> , Meek, pl. xxvi, fig. 14.....                                | 39, 445 |
| <i>Cerithidea? nebrascensis</i> , M. & H., pl. xxvi, fig. 19.....                        | 57, 463 |
| <i>Micropyrgus minutulus</i> , M. & H., pl. xxvi, fig. 20.....                           | 59, 465 |
| <i>Campeloma producta</i> , White, pl. xxvi, figs. 21-27.....                            | 63, 469 |
| <i>Campeloma multilineata</i> , M. & H., pl. xxvii, figs. 1-7.....                       | 63, 469 |
| <i>Campeloma vetula</i> , M. & H., pl. xxvii, figs. 8 and 9.....                         | 63, 469 |
| <i>Campeloma multistriata</i> , M. & H., pl. xxvii, fig. 15.....                         | 63, 469 |
| <i>Viviparus lei</i> , M. & H., pl. xxvii, figs. 10-14.....                              | 61, 467 |
| <i>Planorbis convolutus</i> , M. & H., pl. xxvii, fig. 16.....                           | 41, 447 |
| <i>Planorbis (Bathymorphus) planoconvexus</i> , M. & H., pl. xxvii, figs. 17 and 18..... | 41, 447 |
| <i>Planorbis (Bathymorphus) amplexus</i> , M. & H., pl. xxvii, figs. 19 and 20.....      | 41, 447 |
| <i>Planorbis (Bathymorphus) kanabensis</i> , M. & H., pl. xxvii, figs. 21-23.....        | 41, 447 |
| <i>Valvata? montanensis</i> , Meek, pl. xxvii, fig. 24.....                              | 64, 470 |
| <i>Valvata subumbilicata</i> , M. & H., pl. xxvii, fig. 25.....                          | 64, 470 |
| <i>Hyalina? evansi</i> , M. & H., pl. xxvii, fig. 26.....                                | 46, 452 |
| <i>Hyalina? occidentalis</i> , M. & H., pl. xxvii, fig. 27.....                          | 46, 452 |
| <i>Helix? vetusta</i> , M. & H., pl. xxvii, fig. 28.....                                 | 48, 454 |
| <i>Helix evanstonensis</i> , White, pl. xxvii, figs. 29-31.....                          | 48, 454 |
| <i>Helix sepulta</i> , White.....                                                        | 48, 454 |
| <i>Vitrina obliqua</i> , M. & H., pl. xxvii, figs. 32 and 33.....                        | 46, 452 |
| <i>Goniobasis? subtoruosa</i> , M. & H., pl. xxvii, fig. 34.....                         | 57, 463 |
| <i>Hydrobia utahensis</i> , White, pl. xxvii, fig. 35.....                               | 60, 466 |

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>Hydrobia subconica</i> , Meek, pl. xxvii, fig. 36.....           | 59, 465 |
| <i>Hydrobia</i> ? <i>eulimoides</i> , Meek, pl. xxvii, fig. 37..... | 59, 465 |
| <i>Hydrobia recta</i> , White, pl. xxvii, fig. 38.....              | 60, 466 |
| <i>Hydrobia anthonyi</i> , M. & H., pl. xxvii, fig. 39.....         | 59, 465 |
| <i>Hydrobia warrenana</i> , M. & H., pl. xxvii, fig. 40.....        | 59, 465 |

## EOCENE.

|                                                                                                 |         |
|-------------------------------------------------------------------------------------------------|---------|
| <i>Unio clinopisthus</i> , White, pl. xxviii, figs. 1 and 2.....                                | 28, 434 |
| <i>Unio shoshonensis</i> , White, pl. xxviii, fig. 3.....                                       | 29, 435 |
| <i>Unio haydeni</i> , Meek, pl. xxviii, figs. 4 and 5.....                                      | 29, 435 |
| <i>Unio washakiensis</i> , Meek, pl. xxviii, fig. 6-8.....                                      | 29, 435 |
| <i>Unio tellinoides</i> , Hall, pl. xxviii, fig. 9.....                                         | 29, 435 |
| <i>Planorbis</i> ( <i>Gyraulus</i> ) <i>militaris</i> , White, pl. xxviii, figs. 10 and 11..... | 41, 447 |
| <i>Bythinella gregaria</i> , Meek, pl. xxviii, figs. 12 and 13.....                             | 60, 466 |
| <i>Bulinus floridanus</i> , Conrad, pl. xxviii, fig. 14.....                                    | 48, 454 |
| <i>Melania claihornensis</i> , Heilprin, pl. xxviii, fig. 15.....                               | 54, 460 |
| <i>Planorbis utahensis</i> , Meek, pl. xxix, figs. 1-3.....                                     | 41, 447 |
| <i>Planorbis utahensis</i> var. <i>spectabilis</i> , Meek, pl. xxix, figs. 4-6.....             | 41, 447 |
| <i>Planorbis cirratus</i> , White, pl. xxix, fig. 7.....                                        | 42, 448 |
| <i>Planorbis equalis</i> , White, pl. xxix, figs. 8-10.....                                     | 42, 448 |
| <i>Helix peripleria</i> , White, pl. xxix, figs. 11 and 12.....                                 | 49, 455 |
| <i>Helix riparia</i> , White, pl. xxix, figs. 13 and 14.....                                    | 49, 455 |
| <i>Pupa incolata</i> , White, pl. xxix, figs. 15-17.....                                        | 50, 456 |
| <i>Pupa atavuncula</i> , White, pl. xxix, fig. 18.....                                          | 50, 456 |
| <i>Pupa arenata</i> , White, pl. xxix, fig. 19.....                                             | 50, 456 |
| <i>Limnæa similis</i> , Meek, pl. xxix, figs. 20 and 21.....                                    | 39, 445 |
| <i>Limnæa vetusta</i> , Meek, pl. xxix, figs. 22 and 23.....                                    | 39, 445 |
| <i>Limnæa minusculea</i> , White, pl. xxix, figs. 24 and 25.....                                | 40, 446 |
| <i>Succinea</i> ( <i>Brachyspira</i> ) <i>papillispira</i> , White, pl. xxix, fig. 26.....      | 51, 457 |
| <i>Anodonta decurtata</i> , Conrad, pl. xxix, figs. 27 and 28.....                              | 73, 479 |
| <i>Macrocyclus spatiosa</i> , M. & H., pl. xxx, figs. 1-3.....                                  | 46, 452 |
| <i>Helix</i> ? <i>veterne</i> , M. & H., pl. xxx, figs. 4 and 5.....                            | 48, 454 |
| <i>Physa pleromatis</i> , White, pl. xxx, figs. 6-8.....                                        | 44, 450 |
| <i>Physa bridgerensis</i> , Meek, pl. xxx, figs. 9 and 10.....                                  | 44, 450 |
| <i>Viviparus pabudinaformis</i> , Hall, pl. xxx, figs. 11 and 12.....                           | 62, 468 |
| <i>Viviparus wyomingensis</i> , Meek, pl. xxx, figs. 13 and 14.....                             | 62, 468 |
| <i>Goniobasis tenera</i> , Hall, and varieties, pl. xxxi.....                                   | 58, 464 |

## MIOCENE AND PIOCENE?

|                                                                                             |         |
|---------------------------------------------------------------------------------------------|---------|
| <i>Melania sculptilis</i> , Meek, pl. xxxii, fig. 1.....                                    | 55, 461 |
| <i>Melania subsculptilis</i> , Meek, pl. xxxii, fig. 2.....                                 | 55, 461 |
| <i>Melania taylari</i> , Gabb, pl. xxxii, fig. 3.....                                       | 55, 461 |
| <i>Lithasia antiqua</i> , Gabb, pl. xxxii, fig. 4.....                                      | 59, 465 |
| <i>Carinifex</i> ( <i>Vorticifex</i> ) <i>binneyi</i> , Meek, pl. xxxii, figs. 5 and 6..... | 42, 448 |
| <i>Carinifex</i> ( <i>Vorticifex</i> ) <i>tryoni</i> , Meek, pl. xxxii, figs. 7-9.....      | 42, 448 |
| <i>Ancylus undulatus</i> , Meek, pl. xxxii, fig. 10.....                                    | 45, 451 |
| <i>Sphærium rugosum</i> , Meek, pl. xxxii, figs. 11-13.....                                 | 34, 440 |
| <i>Sphærium idahoense</i> , Meek, pl. xxxii, figs. 14 and 15.....                           | 34, 440 |
| <i>Planorbis vetustus</i> , M. & H., pl. xxxii, figs. 16-18.....                            | 42, 448 |
| <i>Planorbis leidyi</i> , M. & H., pl. xxxii, figs. 19-21.....                              | 42, 448 |
| <i>Planorbis nebrascensis</i> , Evans & Shumard, pl. xxxii, figs. 22 and 23.....            | 42, 448 |
| <i>Planorbis lunata</i> , Conrad, pl. xxxii, figs. 24 and 25.....                           | 42, 448 |
| <i>Limnæa meekii</i> , Evans & Shumard, pl. xxxii, figs. 26 and 27.....                     | 40, 446 |
| <i>Limnæa shumardi</i> , M. & H., pl. xxxii, figs. 28 and 29.....                           | 40, 446 |
| <i>Limnæa</i> ( <i>Polyrhysis</i> ) <i>kingii</i> , Meek, pl. xxxii, figs. 30 and 31.....   | 40, 446 |
| <i>Helix leidyi</i> , Hall & Meek, pl. xxxii, figs. 32 and 33.....                          | 49, 455 |
| <i>Helix</i> ( <i>Zonites</i> ) <i>marginicola</i> , Conrad, pl. xxxii, fig. 34.....        | 47, 453 |
| <i>Physa scalina</i> , Evans & Shumard, pl. xxxii, figs. 35 and 36.....                     | 44, 450 |
| <i>Latia dallii</i> , n. s. White, 1883, pl. xxxii, figs. 37-40.....                        | 45, 451 |
| <i>Unio meekii</i> , White.....                                                             | 28, 434 |
| <i>Unio leai</i> , Meek.....                                                                | 28, 434 |
| <i>Viviparus ionicus</i> , White.....                                                       | 62, 468 |



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## CARBONIFEROUS.

|                                                                | Page. |
|----------------------------------------------------------------|-------|
| <i>Ostrea</i> , Linnaeus .....                                 | 288   |
| <i>O. patercula</i> , Winchell, pl. xxxiv, figs. 1 and 2 ..... | 288   |

## JURASSIC.

|                                                                                               |         |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Ostrea</i> , Linnaeus .....                                                                | 289     |
| <i>O. engelmanni</i> , Meek, pl. xxxiv, figs. 3 and 4 .....                                   | 289     |
| <i>O. strigilecula</i> , White, pl. xxxv, figs. 9-11 .....                                    | 289-290 |
| <i>O. (Alectryonia) procumbens</i> , White, pl. xxxv, figs. 6-8 .....                         | 290     |
| <i>Gryphaea</i> , Lamarck .....                                                               | 290     |
| <i>G. calceola</i> , Quenstedt, var. <i>nebrascensis</i> , M. & H., pl. xxxv, figs. 1-5 ..... | 290     |

## CRETACEOUS.

|                                                                                                    |         |
|----------------------------------------------------------------------------------------------------|---------|
| <i>Ostrea</i> , Linnaeus .....                                                                     | 291     |
| <i>O. americana</i> , Deshayes, pl. lvi, figs. 1 and 2, pl. lvii, figs. 1 and 2 .....              | 291     |
| <i>O. anomiaformis</i> , Roemer .....                                                              | 291     |
| <i>O. anomioides</i> , Meek, pl. xxxix .....                                                       | 291     |
| <i>O. appressa</i> , Gabb, pl. xxxix, fig. 9 .....                                                 | 291-292 |
| <i>O. bella</i> , Conrad, pl. xxxix, fig. 6 .....                                                  | 292     |
| <i>O. bellarugosa</i> , Shumard .....                                                              | 292     |
| <i>O. belliplicata</i> , Shumard, pl. lxxviii, figs. 1-3 .....                                     | 292     |
| <i>O. blackii</i> , White, pl. xlv, fig. 1, and pl. xlvi, fig. 2 .....                             | 292     |
| <i>O. barrandei</i> , Coquand, pl. xlv, figs. 1 and 2, pl. xlv, fig. 2, and pl. xlvi, fig. 1 ..... | 292-293 |
| <i>O. breweri</i> , Gabb .....                                                                     | 293     |
| <i>O. bryani</i> , Gabb .....                                                                      | 293     |
| <i>O. carinata</i> (Lamarck), Roemer, pl. xliii, figs. 1-4 .....                                   | 293     |
| <i>O. coalvillensis</i> , Meek, pl. xxxvi, figs. 1-4 .....                                         | 293     |
| <i>O. confragosa</i> , Conrad .....                                                                | 293     |
| <i>O. congesta</i> , Conrad, pl. xxxix, figs. 11-13 .....                                          | 294     |
| <i>O. convexa</i> , Say, pl. xlviii, figs. 1-5 .....                                               | 294     |
| <i>O. cortex</i> , Conrad, pl. xxxvii, figs. 3 and 4 .....                                         | 294     |
| <i>O. crenulata</i> , Tuomey .....                                                                 | 294     |
| <i>O. crenulimargo</i> , Roemer, pl. xliii, figs. 8, 9 .....                                       | 294     |
| <i>O. crenulimarginata</i> , Gabb, pl. xl, fig. 2 .....                                            | 294     |
| <i>O. cretacea</i> , Morton, Owen, pl. xxxix, figs. 1-3 .....                                      | 294-295 |
| <i>O. denticulifera</i> , Conrad .....                                                             | 295     |
| <i>O. diluviana</i> , Linnaeus, pl. xl, fig. 1, pl. xli, figs. 1 and 2 .....                       | 295     |
| <i>O. elegantula</i> , Newberry, pl. xxxvi, figs. 5-7 .....                                        | 295     |
| <i>O. exogyrella</i> , Gabb .....                                                                  | 296     |
| <i>O. falcata</i> , Morton, pl. xlii, figs. 2-9 .....                                              | 296     |
| <i>O. franklini</i> , Coquand, pl. xxxix, figs. 1-3 .....                                          | 296     |
| <i>O. gabbanna</i> , M. & H. ....                                                                  | 296     |

|                                                                                    | Page.   |
|------------------------------------------------------------------------------------|---------|
| <i>O. inornata</i> , Meek .....                                                    | 296     |
| <i>O. idriensis</i> , Gabb, pl. xxxiv, figs. 7 and 8 .....                         | 296     |
| <i>O. (Alectryon) larva</i> , Lamarek, pl. xlii, figs. 2-9 .....                   | 296     |
| <i>O. lateralis</i> , Nilsson .....                                                | 297     |
| <i>O. littlei</i> , Gabb .....                                                     | 297     |
| <i>O. lugubris</i> , Conrad, pl. xli, fig. 3 .....                                 | 297     |
| <i>O. tyoni</i> , Shumard .....                                                    | 297     |
| <i>O. malloformis</i> , Gabb, pl. 1, fig. 8 .....                                  | 297     |
| <i>O. mesenterica</i> , Morton, pl. xlii, figs. 2-9 .....                          | 297     |
| <i>O. mortoni</i> , Gabb .....                                                     | 297     |
| <i>O. multilirata</i> , Conrad, pl. xxxviii, figs. 1 and 2 .....                   | 298     |
| <i>O. nasuta</i> , Morton, pl. xlii, figs. 2-9 .....                               | 298     |
| <i>O. oenenana</i> , Shumard .....                                                 | 298     |
| <i>O. panda</i> , Morton .....                                                     | 298     |
| <i>O. pandeformis</i> , Gabb .....                                                 | 298     |
| <i>O. patina</i> , M. & H., pl. xlvii, figs. 4-6 .....                             | 298     |
| <i>O. peculiaris</i> , Conrad .....                                                | 298     |
| <i>O. pellucida</i> , M. & H., pl. 1, figs. 6 and 7 .....                          | 299     |
| <i>O. planocata</i> , Shumard .....                                                | 299     |
| <i>O. plumosa</i> , Morton, pl. xxxvii, figs. 5 and 6 .....                        | 299     |
| <i>O. prudentia</i> , White, pl. xl, figs. 5 and 6 .....                           | 299     |
| <i>O. quadruplicata</i> , Shumard, pl. xliii, figs. 5-7 .....                      | 299-300 |
| <i>O. robusta</i> , Conrad, pl. xl, figs. 3 and 4 .....                            | 300     |
| <i>O. sannionis</i> , White, pl. xlv, figs. 3-7 .....                              | 300     |
| <i>O. soleniscus</i> , Meek, pl. xlii, fig. 1 .....                                | 300     |
| <i>O. subalata</i> , Meek, pl. xxxix, fig. 10 .....                                | 300     |
| <i>O. suborata</i> , Shumard .....                                                 | 301     |
| <i>O. subspatulata</i> , Forbes, pl. xxxvii, figs. 1 and 2 .....                   | 301     |
| <i>O. tecticostata</i> , Gabb, pl. 1, figs. 3 and 4 .....                          | 301     |
| <i>O. torosa</i> , Morton .....                                                    | 301     |
| <i>O. translucida</i> , M. & H. ....                                               | 301     |
| <i>O. tuomeyi</i> , Coquand .....                                                  | 301-302 |
| <i>O. uniformis</i> , Meek, pl. xlviii, figs. 6 and 7 .....                        | 302     |
| <i>O. velicata</i> , Conrad .....                                                  | 302     |
| <i>O. vomer</i> , Morton, pl. xlviii, figs. 8-10 .....                             | 302     |
| <i>Gryphaea</i> , Lamarek .....                                                    | 302     |
| <i>G. mucronata</i> , Gabb .....                                                   | 302     |
| <i>G. mutabilis</i> , Morton, pl. xlviii, figs. 1-5 .....                          | 302     |
| <i>G. navia</i> , Conrad .....                                                     | 302     |
| <i>G. pitcheri</i> , Morton, pl. xlix, figs. 1-6 .....                             | 302-303 |
| <i>G. thirsæ</i> , Gabb .....                                                      | 303     |
| <i>G. vesicularis</i> , Lamarek, pl. xlviii, figs. 1-5 .....                       | 303     |
| <i>G. vomer</i> , Morton .....                                                     | 303     |
| <i>Exogyra</i> , Say .....                                                         | 303     |
| <i>E. arietina</i> , Roemer, pl. lvi, figs. 3-5 .....                              | 303-304 |
| <i>E. aquila</i> , Goldfuss, pl. liii, figs. 1 and 2 .....                         | 304     |
| <i>E. columbella</i> , Meek, pl. lv, figs. 5 and 6 .....                           | 304     |
| <i>E. costata</i> , Say, pl. lvi, figs. 1 and 2, and pl. lvii, figs. 1 and 2 ..... | 304     |
| <i>E. fimbriata</i> , Conrad .....                                                 | 305     |
| <i>E. forniculata</i> , White, pl. lii, figs. 1 and 2 .....                        | 305     |
| <i>E. fragosa</i> , Conrad .....                                                   | 305     |
| <i>E. interrupta</i> , Conrad .....                                                | 305     |
| <i>E. leviuscula</i> , Roemer, pl. lii, figs. 3-5 .....                            | 305-306 |
| <i>E. matheroniana</i> , d'Orbigny .....                                           | 306     |
| <i>E. plicata</i> , Lamarek .....                                                  | 306     |
| <i>E. ponderosa</i> , Roemer, pl. 1, figs. 1 and 2 .....                           | 306     |
| <i>E. parasitica</i> , Gabb, pl. lv, figs. 3 and 4 .....                           | 306     |
| <i>E. texana</i> , Roemer, pl. li, figs. 1-5 .....                                 | 306     |
| <i>E. walkeri</i> , White, pl. liv, figs. 1 and 2 .....                            | 307     |
| <i>E. winchelli</i> , White, pl. lv, figs. 6 and 7; pl. lvi, figs. 1 and 2 .....   | 307     |

LARAMIE GROUP.

|                                                                     |         |
|---------------------------------------------------------------------|---------|
| <i>Ostrea Linnaeus.</i>                                             |         |
| <i>O. glabra</i> , M. & H., pls. lviii, lix, lx, lxi .....          | 307-308 |
| <i>O. subtrigonalis</i> , Evans & Shumard, pl. lxi, figs. 4-7 ..... | 308     |

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Page.

|                                                                                                        |     |
|--------------------------------------------------------------------------------------------------------|-----|
| <i>Soleniscus</i> ? ( <i>Macrocheilus</i> ) <i>ponderosus</i> , Swallow ? pl. viii, figs. 1 and 2..... | 187 |
| <i>Soleniscus</i> ? ( <i>Macrocheilus</i> ) <i>primigenius</i> , Conrad, pl. viii, fig. 3.....         | 187 |
| <i>Soleniscus</i> ( <i>Macrocheilus</i> ) <i>fusiformis</i> , Hall, pl. viii, figs. 4-6.....           | 187 |
| <i>Soleniscus</i> ( <i>Macrocheilus</i> ) <i>neuberryi</i> , Hall, pl. viii, figs. 7 and 8.....        | 187 |
| <i>Soleniscus planus</i> , White, pl. viii, figs. 9, 10.....                                           | 187 |
| <i>Soleniscus</i> ( <i>Macrocheilus</i> ) <i>ventricosus</i> , Hall, pl. viii, figs. 11 and 12.....    | 187 |
| <i>Soleniscus</i> ( <i>Macrocheilus</i> ) <i>texanus</i> , Shumard, pl. viii, figs. 13 and 14.....     | 187 |
| <i>Soleniscus</i> ? ( <i>Macrocheilus</i> ) <i>medialis</i> M. & W., pl. viii, figs. 15 and 16.....    | 187 |
| <i>Soleniscus</i> ( <i>Macrocheilus</i> ) <i>paludinae formis</i> , Hall, pl. viii, fig. 17.....       | 187 |
| <i>Soleniscus typicus</i> , M. & W., pl. viii, figs. 18 and 19.....                                    | 187 |

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|                                                                                         | Page |
|-----------------------------------------------------------------------------------------|------|
| <i>Requienia</i> , Matheron .....                                                       | 6    |
| <i>R. patagiata</i> , n. s., White, 1884, pl. i, figs. 1-8, and pl. ii, figs. 1-4 ..... | 6-7  |
| <i>R. texana</i> , Rømer, 1852, pl. ii, figs. 5-7 .....                                 | 7    |
| <i>Monopleura</i> , Matheron .....                                                      | 8    |
| <i>M. marcida</i> , n. s., White, 1884, pls. iii and iv .....                           | 8    |
| <i>M. pinguicula</i> , n. s., White, 1884, pl. v .....                                  | 8-9  |

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|                                                                            | Page. |
|----------------------------------------------------------------------------|-------|
| <i>Mollusca</i> .                                                          |       |
| <i>Aucella</i> , Keyserling .....                                          | 13    |
| <i>A. concentrica</i> , Fischer var. White, 1884, pl. vi, figs. 2-12 ..... | 13-14 |
| <i>Cyprina</i> , Lamarck .....                                             | 14    |
| <i>C. ? dallii</i> , n. s., White, 1884, pl. vi, fig. 1 .....              | 14    |
| <i>Belemnites</i> , Lamarck .....                                          | 14    |
| <i>B. macritatis</i> , n. s., White, 1884, pl. vi, figs. 13-14 .....       | 14-15 |

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|                                                                                 | Page. |
|---------------------------------------------------------------------------------|-------|
| <i>Enclimatoceras</i> , n. g., Hyatt, 1884 .....                                | 16-17 |
| <i>E. (Nautilus) ulrichi</i> , n. s., White, 1884, pls. vii, viii, and ix ..... | 17    |

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Description of species.

| Protozoa.                                                                                 | Page.   |
|-------------------------------------------------------------------------------------------|---------|
| <i>Foraminifera.</i>                                                                      |         |
| <i>Fusulina</i> , Fischer .....                                                           | 116     |
| <i>F. cylindrica</i> , Fischer, pl. xxiii, figs. 1-3 .....                                | 116-117 |
| <i>Cœlenterata.</i>                                                                       |         |
| <i>Polypi.</i>                                                                            |         |
| <i>Zaphrentis</i> , Rafinesque .....                                                      | 117     |
| <i>Z. gibsoni</i> , n. s., White, 1884, pl. xxiii, figs. 4 and 5 .....                    | 117-118 |
| <i>Lophophyllum</i> , Edwards & Haime .....                                               | 118     |
| <i>L. proliferum</i> , McCheaney, pl. xxiii, figs. 6 and 7 .....                          | 118     |
| <i>Azophyllum</i> , Edwards & Haime .....                                                 | 118     |
| <i>A. rudis</i> , White & St. John, 1867, pl. xxiii, figs. 8 and 9 .....                  | 118-119 |
| <i>Oampophyllum</i> , Edwards & Haime .....                                               | 119     |
| <i>C. torquim</i> , Owen, 1852, pl. xxiii, figs. 10-13 .....                              | 119     |
| <i>Michelinia</i> , de Koninck .....                                                      | 119     |
| <i>M. eugeneæ</i> , n. s., White, 1884, pl. xxiii, figs. 14-16 .....                      | 119-120 |
| <i>Brachiopoda.</i>                                                                       |         |
| <i>Lingula</i> , Bruguière .....                                                          | 120     |
| <i>L. umbonata</i> , Cox, 1857, pl. xxv, fig. 14 .....                                    | 120     |
| <i>Discina</i> , Lamarck .....                                                            | 121     |
| <i>D. nitida</i> , Phillips, pl. xxv, fig. 10 .....                                       | 121     |
| <i>D. convexa</i> , Shumard, 1858, pl. xxv, fig. 9 .....                                  | 121     |
| <i>Orania</i> , Retzius .....                                                             | 121     |
| <i>O. modesta</i> , White & St. John, 1867, pl. xxxv, fig. 9, and pl. xxxvi, fig. 5 ..... | 121-122 |
| <i>Productus</i> , Sowerby .....                                                          | 122     |
| <i>P. nebrascensis</i> , Owen, 1852, pl. xxiv, figs. 7-9 .....                            | 122-123 |
| <i>P. symmetricus</i> , McChesney, 1866, pl. xxv, figs. 1 and 2 .....                     | 123     |
| <i>P. punctatus</i> , Martin, pl. xxvii, figs. 1-3 .....                                  | 124     |
| <i>P. costatus</i> , Sowerby, pl. xxiv, figs. 4-6, and pl. xxv, figs. 3-5 .....           | 124-125 |
| <i>P. semireticulatus</i> , Martin, pl. xxiv, figs. 1-3 .....                             | 125-126 |
| <i>P. cora</i> , d'Orbigny pl. xxvi, figs. 1-3 .....                                      | 126-127 |
| <i>P. longispinus</i> , Sowerby, pl. xxiv, figs. 10 and 11 .....                          | 127-128 |
| <i>Ohonetes</i> , Fischer .....                                                           | 128     |
| <i>O. verneuiliana</i> , Norwood & Pratten, 1854, pl. xxv, figs. 7 and 8 .....            | 128     |
| <i>Orthis</i> , Dalman .....                                                              | 129     |
| <i>O. pecosi</i> , Marcou, 1858, pl. xxxii, figs. 20-22 .....                             | 129     |
| <i>Hemipronites</i> , Pander .....                                                        | 129     |
| <i>Streptorhynchus</i> , King .....                                                       | 129     |
| <i>Hemipronites crassus</i> , M. & H., pl. xxvi, figs. 4-11 .....                         | 129-130 |
| <i>Meekella</i> , White & St. John .....                                                  | 130     |
| <i>M. striatocostata</i> , Cox, 1857, pl. xxvi, figs. 12-14 .....                         | 130-131 |
| <i>Syntriclasma</i> , M. & W. ....                                                        | 131     |
| <i>S. hemiplicata</i> , Hall, 1852, pl. xxvi, figs. 15-18 .....                           | 131-132 |
| <i>Rhynchonella</i> , Fischer .....                                                       | 132     |
| <i>R. uta</i> , Marcou, 1858, pl. xxv, fig. 6 .....                                       | 132     |

|                                                                                               | Page.   |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Spirifer</i> , Sowerby .....                                                               | 132     |
| <i>S. cameratus</i> , Morton, 1836, pl. xxxv, figs. 3-5.....                                  | 132-133 |
| <i>S. (Martinia) lineatus</i> , Martin, pl. xxvii, figs. 4-6.....                             | 133-134 |
| <i>S. (Martinia) planoconvexa</i> , Shumard, 1855, pl. xxxii, figs. 23 and 24.....            | 134-135 |
| <i>Spiriferina</i> , d'Orbigny .....                                                          | 135     |
| <i>S. kentuckensis</i> , Shumard, 1855, pl. xxxv, figs. 13 and 14.....                        | 135     |
| <i>Athyris</i> , McCoy .....                                                                  | 136     |
| <i>A. subtilita</i> , Hall, pl. xxxv, figs. 6-9.....                                          | 136     |
| <i>Retzia</i> , King .....                                                                    | 136     |
| <i>R. mormonii</i> , Marcou, 1858, pl. xxxv, figs. 10-12.....                                 | 136-137 |
| <i>Terebratula</i> , Lillhyrd.....                                                            | 137     |
| <i>T. bovidens</i> , Morton, 1836, pl. xxxii, figs. 17-19.....                                | 137     |
| <b>Polyzoa.</b>                                                                               |         |
| <i>Syncladia</i> , King.....                                                                  | 138     |
| <i>S. biserialis</i> , Swallow, 1858, pl. xxv, figs. 11-13.....                               | 138     |
| <b>Conchifera.</b>                                                                            |         |
| <i>Lima</i> , Bruguière.....                                                                  | 138     |
| <i>L. retifera</i> , Shumard, 1858, pl. xxviii, fig. 4.....                                   | 138-139 |
| <b>Monopteria</b> , M. & W.....                                                               | 139     |
| <i>M. gibbosa</i> , M. & W., 1866, pl. xxx, figs. 11 and 12.....                              | 139     |
| <i>Myalina</i> , de Koninck.....                                                              | 140     |
| <i>M. subquadrata</i> , Shumard, 1855, pl. xxix, figs. 1 and 2, and pl. xxx, figs. 1 and 2 .. | 140     |
| <i>M. recurvirostris</i> , M. & W., 1866, pl. xxix, figs. 3 and 4.....                        | 140-141 |
| <i>M. ? swallowi</i> , McChesney, 1860, pl. xxx, figs. 6-8.....                               | 141     |
| <i>Entolium</i> , Meek .....                                                                  | 142     |
| <i>E. aviculatum</i> , Swallow, 1858, pl. xxviii, figs. 7 and 8.....                          | 142     |
| <i>Eumicrotis</i> , Meek .....                                                                | 142     |
| <i>E. hawni</i> , M. & H., 1866, pl. xxx, fig. 10.....                                        | 142-143 |
| <i>Aviculopecten</i> , McCoy .....                                                            | 143     |
| <i>A. occidentalis</i> , Shumard, 1855, pl. xxviii, fig. 3.....                               | 143     |
| <i>A. carboniferus</i> , Stevens, 1858, pl. xxviii, figs. 5 and 6.....                        | 144     |
| <i>A. ? interlineatus</i> , M. & W., pl. xxx, fig. 9.....                                     | 145     |
| <i>Pinna</i> , Linnaeus.....                                                                  | 145     |
| <i>P. peracuta</i> , Shumard, 1858, pl. xxviii, figs. 1 and 2.....                            | 145-146 |
| <i>Nuculana</i> , Link .....                                                                  | 146     |
| <i>N. bellistriata</i> , Stevens, 1858, pl. xxxi, figs. 8 and 9.....                          | 146     |
| <i>Nucula</i> , Lamarek.....                                                                  | 146     |
| <i>N. ventricosa</i> , Hall, 1858, pl. xxvii, figs. 9 and 10.....                             | 146-147 |
| <i>Schizodus</i> , King .....                                                                 | 147     |
| <i>S. wheeleri</i> , Swallow, 1862, pl. xxx, figs. 3-5.....                                   | 147     |
| <i>Chinopistha</i> , M. & W.....                                                              | 147     |
| <i>C. radiata</i> , Hall, 1858, pl. xxxi, figs. 6 and 7.....                                  | 147-148 |
| <i>Edmondia</i> , de Koninck.....                                                             | 148     |
| <i>E. aspinwallensis</i> , Meek, 1872, pl. xxxi, figs. 4 and 5.....                           | 148     |
| <i>Allorisma</i> , King.....                                                                  | 148     |
| <i>A. subcuneata</i> , M. & H., 1864, pl. xxxi, figs. 1-3.....                                | 148-149 |
| <b>Gasteropoda.</b>                                                                           |         |
| The genera <i>Macrocheilus</i> and <i>Soleniscus</i> .....                                    | 149-152 |
| <i>Soleniscus</i> , M. & W.....                                                               | 152     |
| <i>S. typicus</i> , M. & W., 1866, pl. xxxiv, figs. 18, 19.....                               | 152     |
| <i>S. (Macrocheilus) newberryi</i> , Stevens, 1858, pl. xxxiv, figs. 7 and 8.....             | 153     |
| <i>S. planus</i> , White, 1881, pl. xxxiv, figs. 9 and 10.....                                | 153-154 |
| <i>S. (Macrocheilus) fusiformis</i> , Hall, 1858, pl. xxxiv, figs. 4-6.....                   | 154     |
| <i>S. (Macrocheilus) paludinaformis</i> , Hall, 1858, pl. xxxiv, fig. 17.....                 | 154-155 |
| <i>S. (Macrocheilus) ventricosus</i> , Hall, 1858, pl. xxxiv, figs. 11 and 12.....            | 155     |
| <i>S. (Macrocheilus) texanus</i> , Shumard ? 1859, pl. xxxiv, figs. 13 and 14.....            | 155-156 |
| <i>S. (Macrocheilus) medialis</i> , M. & W., 1866, pl. xxxiv, figs. 15 and 16.....            | 156     |
| <i>S. (Macrocheilus) ponderosus</i> , Swallow ?, 1858, pl. xxxiv, figs. 1 and 2.....          | 156     |
| <i>S. (Macrocheilus) primigenius</i> , Conrad, 1835, pl. xxxiv, fig. 3.....                   | 157     |
| <i>Bellerophon</i> , Montfort.....                                                            | 157     |
| <i>B. crassus</i> , M. & W., 1866, pl. xxxiii, figs. 1 and 2.....                             | 157     |
| <i>B. percarinatus</i> , Conrad, 1842, pl. xxxiii, figs. 9-14.....                            | 158     |
| <i>B. carbonarius</i> , Cox, 1857, pl. xxxiii, figs. 6-8.....                                 | 158-159 |
| <i>B. nodocarinatus</i> , Hall, 1858, pl. xxxiii, figs. 3-5.....                              | 159     |
| <i>Platyceras</i> , Conrad .....                                                              | 159     |



|                                                                                         | Page.   |
|-----------------------------------------------------------------------------------------|---------|
| <i>P. nebrascense</i> , Meek, 1872, pl. xxxii, figs. 15 and 16.....                     | 159-160 |
| <i>Pleurotomaria</i> , DeFrance .....                                                   | 160     |
| <i>P. turbiniformis</i> , M. & W., 1866, pl. xxxii, figs. 7 and 8 .....                 | 160     |
| <i>P. tabulata</i> , Hall, pl. xxxii, figs. 4 and 5 .....                               | 160-161 |
| <i>P. sphaerulata</i> , Conrad, 1842, pl. xxxii, figs. 1-3.....                         | 161     |
| <i>Euomphalus</i> , Sowerby .....                                                       | 161     |
| <i>E. rugosus</i> , Hall, 1858, pl. xxxii, figs. 11 and 12 .....                        | 161-162 |
| <i>Naticopsis</i> , McCoy .....                                                         | 162     |
| <i>N. nana</i> , M. & W., 1866, pl. xxxvi, figs. 6 and 7 .....                          | 162     |
| <i>N. wheeleri</i> , Swallow, 1860, pl. xxxii, figs. 13 and 14.....                     | 162-163 |
| <i>Polyphemopsis</i> , Portlock .....                                                   | 163     |
| <i>P. peracuta</i> , M. & W., pl. xxxii, figs. 9 and 10 .....                           | 163     |
| <i>P. nitidula</i> , M. & W., 1866, pl. xxvii, figs. 7 and 8 .....                      | 163     |
| <i>Polyphemopsis</i> ? ——— (?) White, 1884, pl. xxxii, fig. 6 .....                     | 164     |
| <i>Cephalopoda.</i>                                                                     |         |
| <i>Orthoceras</i> , Breynius.....                                                       | 164     |
| <i>O. rushensis</i> , McChesney, pl. xxxvi, fig. 5.....                                 | 164     |
| <i>Nautilus</i> , Breynius.....                                                         | 165     |
| <i>N. winslowi</i> , M. & W., 1873, pl. xxxvi, figs. 1 and 2.....                       | 165     |
| <i>N. forbesianus</i> , McChesney, pl. xxxvi, figs. 3 and 4.....                        | 165     |
| <i>N. missouriensis</i> , Swallow? 1857, pl. xxxv, figs. 1 and 2 .....                  | 166     |
| <i>Crustacea.</i>                                                                       |         |
| <i>Gnathostomata.</i>                                                                   |         |
| <i>Leaia</i> , Jones.....                                                               | 167     |
| <i>L. tricarinata</i> , M. & W., 1868, pl. xxxix, figs. 10-13 .....                     | 167-168 |
| <i>Merosomata.</i>                                                                      |         |
| <i>Eurypterus</i> , DeKay .....                                                         | 168     |
| <i>E. (Anthracoetes) mazonensis</i> , M. & W., 1868, pl. xxxvii, figs. 1-3.....         | 168-170 |
| <i>Euproops</i> , M. & W .....                                                          | 170     |
| <i>E. danæ</i> , M. & W., 1866, pl. xxxix, fig. 1 .....                                 | 170-172 |
| <i>E. colleti</i> , n. s., White, 1884, pl. xxxix, fig. 2.....                          | 172     |
| <i>Trilobita.</i>                                                                       |         |
| <i>Phillipsia</i> , Portlock.....                                                       | 173     |
| <i>P. (Griffithides?) scitula</i> , M. & W., 1873, pl. xxxix, figs. 6-9 .....           | 173-174 |
| <i>P. (Griffithides?) sangamonensis</i> , M. & W., 1873, pl. xxxix, figs. 4 and 5 ..... | 174-176 |
| <i>Isopoda.</i>                                                                         |         |
| <i>Acanthotelson</i> , M. & W .....                                                     | 176     |
| <i>A. stimpsoni</i> , M. & W., 1866, pl. xxxvii, figs. 4 and 5 .....                    | 176-177 |
| <i>A. eveni</i> , M. & W., 1868, pl. xxxviii, figs. 4-7 .....                           | 177-178 |
| <i>Dithyrocaris</i> , Scouler .....                                                     | 178     |
| <i>D. carbonarius</i> , M. & W., 1873, pl. xxxix, fig. 3.....                           | 178     |
| <i>Macroura.</i>                                                                        |         |
| <i>Palæocaris</i> , M. & W .....                                                        | 179     |
| <i>P. typus</i> , M. & W., pl. xxxviii, figs. 1-3.....                                  | 179-180 |
| <i>Anthraxipalæmon</i> , Salter .....                                                   | 180     |
| <i>A. gracilis</i> , M. & W., 1865, pl. xxxviii, figs. 8 and 9.....                     | 180     |

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|                                                       | Page. |
|-------------------------------------------------------|-------|
| <i>Belemnites densus</i> , M. & H .....               | 229   |
| <i>Lyosoma Powellii</i> , White .....                 | 230   |
| <i>Myacites (Pleuromya) subcompressa</i> , Meek ..... | 230   |



|                                                                       | Page.   |
|-----------------------------------------------------------------------|---------|
| <i>Astarte Packardii</i> , White .....                                | 230     |
| <i>Arca</i> ( <i>Cucullaea</i> ) <i>inornata</i> , M. & H .....       | 230     |
| <i>Modiola</i> ( <i>Volsella</i> ) <i>subimbricata</i> , M. & H ..... | 230     |
| <i>Pteria</i> ( <i>Oxytoma</i> ) <i>mucronata</i> , M. & H .....      | 230     |
| <i>Camptonectes extenuatus</i> , M. & H .....                         | 230-231 |
| <i>Gryphæa nebrascensis</i> , M. & H .....                            | 231     |

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WHITE, C. A. The Genus *Pyrgulifera*, Meek, and its Associates and Congeners. <Amer. Jour. Sci., 3d ser., vol. xxix, pp. 277-280. New Haven, 1885.

A summary of the occurrence, fossil and recent, of the genus *Pyrgulifera*.

## 150.

WHITE, C. A. On Marine Eocene, Fresh-water Miocene, and other Fossil Mollusca of Western North America. <Bull. U. S. Geol. Surv., No. 18, pp. 1-19, pls. 1-iii. Washington, 1885.

This paper is divided into three parts, the first on "The occurrence of *Cardita planicosta*, Lamarek, in Western Oregon," pl. i, pp. 7-9.

The second on "Fossil Mollusca, from the John Day group in Eastern Oregon," pp. 10-16.

The following new species are described:

|                                                                                               | Page. |
|-----------------------------------------------------------------------------------------------|-------|
| <i>Unio condoni</i> , n. s., White, 1885, pl. ii, figs. 1-3 .....                             | 13-14 |
| <i>Helicidae</i> .....                                                                        | 14    |
| <i>Helix</i> ( <i>Aglaia</i> ) <i>fidelis</i> , Gray, pl. iii, figs. 1-3 .....                | 14    |
| <i>Helix</i> ( <i>Patula</i> ) <i>perspectiva</i> , Say, pl. iii, fig. 7 .....                | 14    |
| <i>Helix</i> ( <i>Monodon</i> ?) <i>dallii</i> , Stearns, MS., 1885, pl. iii, figs. 4-6 ..... | 14-15 |
| <i>Gonostoma yatesi</i> , Cooper, pl. iii, figs. 8-12 .....                                   | 16    |

The third part contains "Supplementary notes on the non-marine fossil mollusca of North America.

|                                      | Page. |
|--------------------------------------|-------|
| <i>Ampullaria powelli</i> .....      | 18    |
| <i>Cerithidea nebrascensis</i> ..... | 19    |
| <i>Dreissena leucopheata</i> .....   | 19    |
| <i>Physa prisca</i> .....            | 18    |
| <i>Unio martini</i> .....            | 18    |
| <i>Zaptychius carbonaria</i> .....   | 18    |

## 151.

WHITE, C. A. On new Cretaceous Fossils from California. <Bull. U. S. Geol. Surv., No. 22, pp. 1 (349);-15 (361), pls. i-v. Washington, 1885.

|                                                                                | Page. |
|--------------------------------------------------------------------------------|-------|
| <i>Chamidae</i> .                                                              |       |
| <i>Coralliochama</i> , n. g., White, 1885 .....                                | 9-10  |
| <i>C. orcutti</i> , n. s., White, 1885, pls. i-iv .....                        | 10-12 |
| <i>Trochidae</i> .                                                             |       |
| <i>Trochus</i> , Linnæus .....                                                 | 12    |
| Subgenus <i>Oxystele</i> , Philippi .....                                      | 12    |
| <i>T. (Oxystele) euryostomus</i> , n. s., White, 1885, pl. v, figs. 9-11 ..... | 12    |
| <i>Neritidae</i> .                                                             |       |
| <i>Nerita</i> , Linnæus .....                                                  | 12    |
| <i>Nerita</i> , — ? White, 1885 .....                                          | 12    |
| <i>Cerithiidae</i> .                                                           |       |
| <i>Cerithium</i> , Bruguière .....                                             | 13    |
| <i>C. pillingi</i> , n. s., White, 1885, pl. v, figs. 3-6 .....                | 13    |
| <i>C. totium sanctorum</i> , n. s., White, 1885, pl. v, figs. 12 and 13 .....  | 13    |
| <i>Solariidae</i> .                                                            |       |
| <i>Solarium</i> , Lamarek .....                                                | 14    |
| <i>S. wallalense</i> , n. s., White, 1885, pl. v, figs. 1 and 2 .....          | 14    |

Besides the foregoing, Dr. White has in press an important work on the Cretaceous invertebrates of Brazil, which were collected by the Imperial Geological Commission under the direction of the late Prof. Ch. Fred. Hartt. The work is in process of publication at Rio de Janeiro by the Brazilian National Museum. It is to appear in Volume VII of the "Archives" of that museum, in both the Portuguese and English languages, and will be illustrated with 28 lithographic plates of figures.

The work consists of five parts, which are as follows in the original Portuguese edition—

Contribuições para a Palæontologia do Brazil :

No. 1. Conchiferos Cretaceos.

No. 2. Gasteropodes Cretaceos.

No. 3. Cephalopodes Cretaceos.

No. 4. Molluscos Cretaceos de Água doce do Grupo da Bahia.

No. 5. Echinodermes Cretaceos.

Two hundred and fourteen species in all are published and figured in this work, of which 116 species are diagnosed as new. Four new genera are proposed, three of gasteropoda and one of echinoids. The former are *Orrillia*, *Cylindritella*, and *Cypræactæon*. The latter is *Heteropoda*, the generic diagnosis of which was furnished to the author by Prof. P. de Loriol, of Geneva.



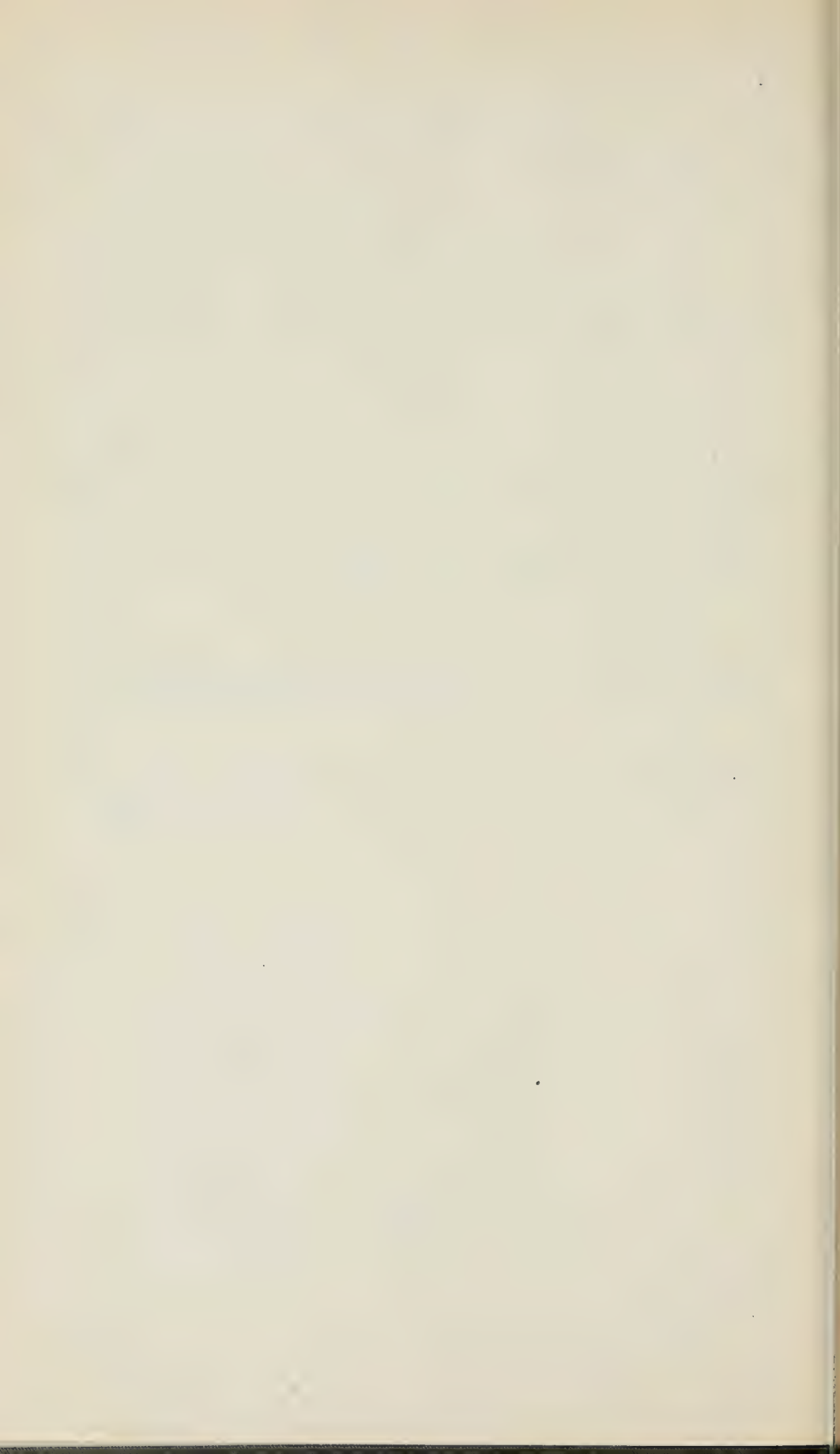
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PART III.

THE PUBLISHED WRITINGS OF CHARLES DOOLITTLE WALCOTT.

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III.—PUBLISHED WRITINGS OF CHARLES DOOLITTLE WALCOTT.

1.

WALCOTT, C. D. Description of a New Species of Trilobite. <Cincinnati Quarterly Journal of Science, vol. ii, pp. 273-274, figs. 18 a, b. July. Cincinnati, 1875.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
|                                                                       | Page.   |
| <i>Spheroecoryphe</i> , Angelin.                                      |         |
| <i>S. robustus</i> , n. s., Walcott, 1875, p. 274, figs. 18 a, b..... | 273-274 |

2.

WALCOTT, C. D. New Species of Trilobite from the Trenton Limestone at Trenton Falls, N. Y. <Cincinnati Quarterly Journal of Science, vol. ii, pp. 347-349, fig. 27. October. Cincinnati, 1875.

|                                                                       |         |
|-----------------------------------------------------------------------|---------|
|                                                                       | Page.   |
| <i>Remopleurides</i> , Portlock.                                      |         |
| <i>R. striatulus</i> , n. s., Walcott, 1875, fig. 27 a, b, and A..... | 347-349 |

3.

WALCOTT, C. D. Notes on *Ceraurus pleurexanthemus*, Green. <Annals Lyc. Nat. Hist. N. Y., vol. xi, pp. 155-162, pl. xi. November. New York, 1875.

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WALCOTT, C. D. Preliminary Notice of the Discovery of the Remains of the Natory and Branchial appendages of Trilobites. <28th Regent's Report N. Y. State Mus. Nat. Hist., pp. 89-92. 1877. Albany, 1879.

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|                                                     |       |
|-----------------------------------------------------|-------|
|                                                     | Page. |
| <i>Conularia</i> , Miller, MS., 1818.....           | 93    |
| <i>C. quadrata</i> , n. s., Walcott, 1877.....      | 93    |
| * <i>Conchopeltis</i> , n. g., Walcott, 1877... ..  | 93    |
| <i>C. alternata</i> , n. s., Walcott, 1877.....     | 93-94 |
| <i>C. minnesotensis</i> , n. s., Walcott, 1877..... | 94    |
| <i>Bathyurus</i> , Billings.....                    | 94    |
| <i>B. longispinus</i> , n. s., Walcott, 1877.....   | 94-96 |
| <i>Asaphus</i> , Brongniart, 1822.....              | 96    |
| <i>A. romingeri</i> , n. s., Walcott, 1877.....     | 96-97 |
| <i>A. wisconsensis</i> , n. s., Walcott, 1877.....  | 97    |

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WALCOTT, C. D. Notes on some Sections of Trilobites from the Trenton limestone, [and] Note upon the Legs of Trilobites. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 61-65, pl. i. Albany, 1879.

Published in advance, September 20, 1877, pp. 1-17, pl. i.  
Extracts from the 31st Regent's report, published in March, 1879.

\* κογχη, shell; πέλτη, shield.

## 7.

WALCOTT, C. D. Note upon the Eggs of the Trilobite. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 66-67? Albany, 1879.

Published in advance, September 20, 1877, pp. 11-13.

Extracts from the 31st Regent's report, published in March, 1879.

## 8.

WALCOTT, C. D. Descriptions of New Species of Fossils from the Chazy and Trenton limestones. <31st Regent's Report N. Y. State Mus. Nat. Hist., pp. 68-71. Albany, 1879.

Published in advance, September 20, 1877, pp. 15-21.

Extract from the 31st Regent's report, published in March, 1879.

|                                                      | Page.        |
|------------------------------------------------------|--------------|
| <i>Arionellus</i> , Barrande, 1846.....              | 15, 68       |
| <i>A. pustulatus</i> , n. s., Walcott, 1877.....     | 15, 68       |
| <i>Ceraurus</i> , Green, 1832.....                   | 15, 68       |
| <i>C. rarus</i> , n. s., Walcott, 1877.....          | 15-16, 68    |
| <i>Encrinurus</i> , Emmerich, 1845.....              | 16, 68       |
| <i>E. trentonensis</i> , n. s., Walcott, 1877.....   | 16, 68       |
| <i>E. varicostatus</i> , n. s., Walcott, 1877.....   | 16, 69       |
| <i>Acidaspis</i> , Murchison, 1839.....              | 16, 69       |
| <i>A. parvula</i> , n. s., Walcott, 1877.....        | 16, 17, 69   |
| <i>Dalmanites</i> , Barrande, 1852.....              | 17, 69       |
| <i>D. intermedius</i> , n. s., Walcott, 1877.....    | 17-18, 69-70 |
| <i>Illexus</i> , Dalman, 1826.....                   | 19, 70       |
| <i>I. indeterminatus</i> , n. s., Walcott, 1877..... | 19-20, 70-71 |
| <i>I. milleri</i> , Billings.....                    | 20, 71       |
| <i>Asaphus</i> , Brongniart, 1822.....               | 20, 71       |
| <i>A. homalonotoides</i> , n. s., Walcott, 1877..... | 20-21, 71    |

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Published in advance, January 3, 1879, pp. 1-4.

|                                                    | Page. |
|----------------------------------------------------|-------|
| <i>Platyceras</i> , Conrad, 1840.....              | 1     |
| <i>P. minutissimum</i> , n. s., Walcott, 1879..... | 1     |
| <i>Metoptoma</i> , Phillips, 1836.....             | 1     |
| <i>M. cornutaforme</i> , n. s., Walcott, 1879..... | 1     |
| <i>Conocephalites</i> , Adams, 1848.....           | 1     |
| <i>O. calciferus</i> , n. s., Walcott, 1879.....   | 1, 2  |
| <i>O. hartii</i> , n. s., Walcott, 1879.....       | 2, 3  |
| <i>Ptychaspis</i> , Hall, 1863.....                | 3     |
| <i>P. speciosus</i> , n. s., Walcott, 1879.....    | 3     |
| <i>Bathyurus armatus</i> , Billings.....           | 3, 4  |

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WALCOTT, C. D. The Utica slate and Related formations. Fossils of the Utica slate and Metamorphoses of Triarthrus Becki. <Trans. Albany Institute, vol. x, pp. 1-38, pls. i-ii. Albany, 1879.

Published in advance, June, 1879.

|                                                                             | Page. |
|-----------------------------------------------------------------------------|-------|
| * <i>Cyathophycus</i> , n. g., Walcott, 1879.....                           | 18    |
| <i>C. reticulatus</i> , n. s., Walcott, 1879, pl. ii, figs. 16, 16 a-d..... | 19    |
| <i>C. subsphericus</i> , n. s., Walcott, 1879, pl. ii, fig. 17.....         | 19    |
| † <i>Discophycus</i> , n. g., Walcott, 1879.....                            | 19    |
| <i>D. typicalis</i> , n. s., Walcott, 1879, pl. ii, figs. 18, 18a.....      | 19    |

\* *Κυαθος*, a cup; *φῦκος*, a weed.

† *Δισκος*, a disk; *φῦκος*, a sea-weed.

|                                                                               | Page. |
|-------------------------------------------------------------------------------|-------|
| <i>Graptolithus</i> , Linnæus, 1736 .....                                     | 20    |
| <i>G. annectans</i> , n. s., Walcott, 1879 .....                              | 20    |
| <i>Dendrograptus</i> , Hall, 1865 .....                                       | 20    |
| <i>D. simplex</i> , n. s., Walcott, 1879, pl. i, figs. 5, 5 a, b, and 6 ..... | 20    |
| <i>D. tenuiramosus</i> , n. s., Walcott, 1879, pl. i, fig. 4 .....            | 21    |
| <i>D. compactus</i> , n. s., Walcott, 1879, pl. i, fig. 1 .....               | 21    |
| <i>Sagenella</i> , Hall, 1852 .....                                           | 22    |
| <i>S. ambigua</i> , n. s., Walcott, 1879, pl. i, figs. 3, 3 a .....           | 22    |
| <i>Modiolopsis</i> , Hall, 1847 .....                                         | 22    |
| <i>M. cancellata</i> , n. s., Walcott, 1879, pl. i, figs. 8, 8 a .....        | 22    |
| <i>Orthoceras</i> , Breynius, 1732 .....                                      | 22    |
| <i>O. oneidaense</i> , n. s., Walcott, 1879, pl. i, figs. 7, 7 a .....        | 22-23 |
| <i>Beyrichia cincinnatiensis</i> , Miller .....                               | 23    |
| <i>Triarthrus becki</i> , Green, 1832 .....                                   | 23-24 |
| Metamorphoses of <i>Triarthrus becki</i> .....                                | 24-26 |
| Degree of development .....                                                   | 26-29 |
| Periods of development .....                                                  | 29-30 |
| Comparison of parts during development .....                                  | 30-31 |
| Table of development .....                                                    | 31-32 |
| Ornamentation .....                                                           | 32-33 |
| Catalogue of fossils occurring in the Utica slate .....                       | 34-38 |

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WALCOTT, C. D. Description of a New Genus of the The Order Euripterida from the Utica slate. < Amer. Jour. Sci., 3d ser., vol. xxiii, pp. 213-216. March. New Haven, 1882.

|                                                                             | Page.   |
|-----------------------------------------------------------------------------|---------|
| <i>Echinognathus</i> , n. g., Walcott, 1882 .....                           |         |
| <i>E. clevelandi</i> , n. s., Walcott, fig. 1, p. 213; fig. 2, p. 214 ..... | 213-216 |

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WALCOTT, C. D. Injury sustained by the Eye of a Trilobite at the time of Moulting of the shell. < Amer. Jour. Sci., 3d ser., vol. xxvi, p. 302. October. New Haven, 1883.

16.

WALCOTT, C. D. Descriptions of new species of Fossils from the Trenton group of New York. < 35th Regents Rep., N. Y. State Mus. Nat. Hist., pp. 207-214, pl. xvii. Albany, 1884.

Published in advance. October 15, 1883, pp. 1-8, pl. xvii.

|                                                                       | Page.        |
|-----------------------------------------------------------------------|--------------|
| <i>Glyptocrinus</i> , Hall .....                                      | 1, 207       |
| <i>G. argutus</i> , n. s., Walcott, 1883, pl. xvii, fig. 9 .....      | 1, 207       |
| <i>G. ? subnodosus</i> , n. s., Walcott, 1883, pl. xvii, fig. 3 ..... | 2, 208       |
| <i>Merocrinus</i> , n. g., Walcott, 1883 .....                        | 2-3, 208-209 |
| <i>M. typus</i> , n. s., Walcott, 1883, pl. xvii, fig. 5 .....        | 3, 209       |



|                                                                               | Page.        |
|-------------------------------------------------------------------------------|--------------|
| <i>M. corroboratus</i> , n. s., Walcott, 1883, pl. xvii, fig. 6 .....         | 4, 210       |
| <i>Iocrinus</i> , Hall .....                                                  | 4, 210       |
| <i>I. trentonensis</i> , n. s., Walcott, 1883, pl. xvii, figs. 7, 8 .....     | 4-5, 210-211 |
| <i>Dendrocrinus</i> , Hall .....                                              | 5, 211       |
| <i>D. retractilis</i> , n. s., Walcott, 1883, pl. xvii, fig. 4 .....          | 5, 211       |
| <i>Calceocrinus</i> , Hall .....                                              | 6, 212       |
| <i>C. barrandii</i> , n. s., Walcott, 1883, pl. xvii, figs. 1, 2 .....        | 6, 212       |
| <i>Metoptoma</i> , Phillips .....                                             | 6, 212       |
| <i>M. billingsi</i> , n. s., Walcott, 1883, pl. xvii, figs. 12, 12 a .....    | 6-7, 212-213 |
| <i>Beyrichia</i> , McCoy .....                                                | 7, 213       |
| <i>B. bella</i> , n. s., Walcott, 1883, pl. xvii, figs. 11, 11 a .....        | 7, 213       |
| <i>Leperditia</i> , Rouault .....                                             | 7, 213       |
| Subgenus <i>Isochilina</i> , Jones .....                                      | 7, 213       |
| <i>S. (Isochilina) armata</i> , n. s., Walcott, 1883, pl. xvii, fig. 10 ..... | 7-8, 213-214 |

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Separates were published in [December, 1883].

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|                                                                  | Page. |
|------------------------------------------------------------------|-------|
| <i>Zptychius</i> , n. g., Walcott, 1883 .....                    | 808   |
| <i>Zptychius carbonaria</i> , n. s., Walcott, 1883, fig. 1 ..... | 808   |
| <i>Physa prisca</i> , n. s., Walcott, 1883, fig. 2 .....         | 809   |
| <i>Ampullaria powelli</i> , n. s., Walcott, 1883, fig. 3 .....   | 809   |

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## CONTENTS.

|                                                                  | Page. |
|------------------------------------------------------------------|-------|
| Letter of transmittal to Mr. Arnold Hague, by the author .....   | v     |
| Letter of transmittal to the director, by Mr. Arnold Hague ..... | vii   |
| Preface .....                                                    | ix    |

|                                                | Page.   |
|------------------------------------------------|---------|
| Summary of results .....                       | 1-9     |
| Fossils of the Cambrian.....                   | 11-64   |
| Observations on <i>Olenellus howelli</i> ..... | 32-39   |
| Fossils of the Lower Silurian.....             | 65-98   |
| Fossils of the Devonian.....                   | 99-211  |
| Fossils of the Carboniferous.....              | 212-267 |
| Systematic list of species.....                | 268-281 |
| Paleozoic section in Central Nevada.....       | 283-285 |
| Index.....                                     | 287-298 |

FOSSILS OF THE CAMBRIAN.

Prospect Mountain Group.

|                                                                                                                           |        |
|---------------------------------------------------------------------------------------------------------------------------|--------|
| <i>Porifera.</i>                                                                                                          |        |
| <i>Protaspongia</i> , Salter.....                                                                                         | 11     |
| <i>P. fenestrata</i> , Salter, 1864, pl. ix, figs. 5, 5 <i>a</i> , <i>b</i> .....                                         | 11-12  |
| <i>Brachiopoda.</i>                                                                                                       |        |
| <i>Lingulepis</i> , Hall.....                                                                                             | 12     |
| <i>L. mara</i> , H. & W., 1877.....                                                                                       | 12-13  |
| <i>L. ? minuta</i> , H. & W., 1877.....                                                                                   | 13     |
| <i>Lingula</i> , Bruguière.....                                                                                           | 13     |
| <i>L. ? manticula</i> , White, 1874, pl. ix, figs. 3 and pl. xi, fig. 2.....                                              | 13-14  |
| <i>Obolella</i> , Billings.....                                                                                           | 14     |
| <i>O. discoidea</i> , H. & W., 1877.....                                                                                  | 14     |
| <i>Acrothele</i> , Linnarsson.....                                                                                        | 14     |
| <i>A. ? dichotoma</i> , n. s., Walcott, 1884, pl. ix, fig. 11.....                                                        | 14-15  |
| <i>Scenella</i> , Billings.....                                                                                           | 15     |
| <i>S. ? conula</i> , n. s., Walcott, 1884, pl. ix, fig. 6.....                                                            | 15-16  |
| <i>Acerotreta</i> , Kutorga.....                                                                                          | 16-17  |
| <i>A. gemma</i> , Billings, 1865, pl. i, figs. 1 <i>a</i> , 1 <i>b</i> , 1 <i>d-f</i> ; pl. ix, figs. 9, 9 <i>a</i> ..... | 17-18  |
| <i>Kutorgina</i> , Billings.....                                                                                          | 18     |
| <i>K. whitfieldi</i> , n. s., Walcott, 1884, pl. ix, figs. 4, 4 <i>a</i> .....                                            | 18-19  |
| <i>K. prospectensis</i> , n. s., Walcott, 1884, pl. ix, figs. 1 <i>a</i> , <i>b</i> .....                                 | 19     |
| <i>K. sculptilis</i> , Meek sp., 1873, pl. i, figs. 7, 7 <i>a</i> , <i>b</i> ; pl. ix, fig. 7.....                        | 20-21  |
| <i>Leptaena</i> , Dalman.....                                                                                             | 22     |
| <i>L. melita</i> , H. & W., 1877.....                                                                                     | 22     |
| <i>Orthis</i> , Dalman.....                                                                                               | 22     |
| <i>O. eurekaensis</i> , n. s., Walcott, 1884, pl. ix, figs. 8, 8 <i>a</i> .....                                           | 22-23  |
| <i>Pteropoda.</i>                                                                                                         |        |
| <i>Stenotheca</i> , Salter.....                                                                                           | 23     |
| <i>S. elongata</i> , n. s., Walcott, 1884, pl. ix, figs. 2, 2 <i>a</i> .....                                              | 23     |
| <i>Hyolithes</i> , Eichwald.....                                                                                          | 23     |
| <i>H. primordialis</i> , Hall sp., 1861.....                                                                              | 23-24  |
| <i>Poecilopoda.</i>                                                                                                       |        |
| <i>Agnostus</i> , Brongniart.....                                                                                         | 24     |
| <i>A. richmondensis</i> , n. s., Walcott, 1884, pl. ix, fig. 10.....                                                      | 24-25  |
| <i>A. seclusus</i> , n. s., Walcott, 1884, pl. ix, fig. 14.....                                                           | 25     |
| <i>A. bidens</i> , Meek, 1873, pl. ix, figs. 13, 13 <i>a</i> .....                                                        | 26, 27 |
| <i>A. communis</i> , H. & W., 1877.....                                                                                   | 27     |
| <i>A. neon</i> , H. & W., 1877.....                                                                                       | 27     |
| <i>A. prolongus</i> , H. & W., 1877.....                                                                                  | 28     |
| <i>Olenellus</i> , Hall.....                                                                                              | 28     |
| <i>O. iddingsi</i> , n. s., Walcott, 1884, pl. ix, fig. 12.....                                                           | 28     |
| <i>O. gilberti</i> , Meek, MSS., 1874, pl. ix, figs. 16, 16 <i>a</i> ; pl. xxi, fig. 13.....                              | 29     |
| <i>O. howelli</i> , Meek, MSS., 1874, pl. ix, figs. 15, 15 <i>a</i> , <i>b</i> , and pl. xxi, figs. 1-9.....              | 30-31  |
| Observations on <i>Olenellus howelli</i> , pl. xxi, figs. 1-7.....                                                        | 32-39  |
| <i>Dicelloccephalus</i> , Owen.....                                                                                       | 40     |
| <i>D. bilobatus</i> , H. & W., 1877.....                                                                                  | 40     |
| <i>D. oscula</i> , Hall, 1863, pl. ix, fig. 25.....                                                                       | 40     |
| <i>D. nasutus</i> , n. s., Walcott, 1884, pl. x, fig. 15.....                                                             | 40-41  |
| <i>D. richmondensis</i> , n. s., Walcott, 1884, pl. x, fig. 7.....                                                        | 41-42  |
| <i>D. ? angustifrons</i> , n. s., Walcott, 1884, pl. x, figs. 1, 1 <i>a</i> , <i>b</i> .....                              | 42-43  |
| <i>D. iole</i> , n. s., Walcott, 1884, pl. x, fig. 19.....                                                                | 43-44  |
| <i>D. macica</i> , n. s., Walcott, 1884, pl. x, fig. 13.....                                                              | 44-45  |
| <i>D. ? quadriceps</i> , H. & W., 1879, pl. ix, fig. 24.....                                                              | 45     |

|                                                                                            | Page. |
|--------------------------------------------------------------------------------------------|-------|
| <i>D. ? expansus</i> , n. s., Walcott, 1884, pl. ix, fig. 19 .....                         | 45-46 |
| <i>Ptychoparia</i> , Corda .....                                                           | 46    |
| <i>P. ? prospectensis</i> , n. s., Walcott, 1884, pl. ix, fig. 20 .....                    | 46-47 |
| <i>P. ? tinnarsoni</i> , n. s., Walcott, 1884, pl. ix, figs. 18, 18 a .....                | 47-48 |
| <i>P. (Solenopleura ?) breviceps</i> , n. s., Walcott, 1884, pl. x, fig. 9 .....           | 49    |
| <i>P. ? pernasutus</i> , n. s., Walcott, 1884, pl. x, figs. 8, 8 a, b .....                | 49-50 |
| <i>P. (Euloma ?) dissimilis</i> , n. s., Walcott, 1884, pl. ix, fig. 28 .....              | 51    |
| <i>P. occidentalis</i> , n. s., Walcott, 1884, pl. x, fig. 5 .....                         | 51-52 |
| <i>P. similis</i> , n. s., Walcott, 1884, pl. x, fig. 10 .....                             | 52-53 |
| <i>P. similis</i> var. <i>robustus</i> , n. var., Walcott, 1884, pl. i, figs. 9, 9 a ..... | 53    |
| <i>P. (Euloma ?) affinis</i> , n. s., Walcott, 1884, pl. x, fig. 12 .....                  | 54    |
| <i>P. leviceps</i> , n. s., Walcott, 1884, pl. x, figs. 17, 18 .....                       | 54-55 |
| <i>P. owenii</i> , M. & H., 1861, pl. x, figs. 3, 3 a .....                                | 55-56 |
| <i>P. anytus</i> , H. & W., 1877, pl. ix, fig. 26 .....                                    | 56    |
| <i>P. granulatus</i> , H. & W., 1877 .....                                                 | 57    |
| <i>P. haguei</i> , H. & W., 1877 .....                                                     | 57    |
| <i>P. nitidus</i> , H. & W., 1877 .....                                                    | 57-58 |
| <i>P. unisulcatus</i> , H. & W., 1877 .....                                                | 58    |
| Subgenus <i>Pteroccephalus</i> , Roemer .....                                              | 58    |
| <i>P. (Pteroccephalus) occidentis</i> , n. s., Walcott, 1884, pl. ix, fig. 21 .....        | 58-59 |
| <i>P. (Pteroccephalus) laticeps</i> , H. & W., 1877 .....                                  | 59    |
| <i>Anomocare</i> , Angelin .....                                                           | 59    |
| <i>A. ? parvum</i> , n. s., Walcott, 1884, pl. ix, fig. 17 .....                           | 59-60 |
| <i>Ptychospis</i> , Hall .....                                                             | 60    |
| <i>P. minuta</i> , Whitfield ? 1878, pl. x, fig. 23 .....                                  | 60-61 |
| <i>Chariocephalus</i> , Hall .....                                                         | 61    |
| <i>C. ? tumifrons</i> , H. & W., 1877, pl. x, fig. 16 .....                                | 61    |
| <i>Agraulos</i> , Corda .....                                                              | 61    |
| <i>A. ? globosus</i> , n. s., Walcott, 1884, pl. ix, fig. 23 .....                         | 61-62 |
| <i>Arethusiana</i> , Barrande .....                                                        | 62    |
| <i>A. americana</i> , n. s., Walcott, 1884, pl. ix, fig. 27 .....                          | 62-63 |
| <i>Ogygia</i> , Brongniart .....                                                           | 63    |
| <i>O. ? spinosa</i> , n. s., Walcott, 1884, pl. ix, fig. 22 .....                          | 63    |
| <i>O. ? problematica</i> , n. s., Walcott, 1884, pl. x, figs. 2 a, b, and 4 .....          | 63-64 |

## FOSSILS OF THE LOWER SILURIAN.

## Pogonip Group.

*Rhizopoda.*

|                                                                     |       |
|---------------------------------------------------------------------|-------|
| <i>Receptaculites</i> DeFraneo .....                                | 65    |
| <i>R. mammillaris</i> , MSS., Newberry, 1880, pl. xi, fig. 11 ..... | 65-66 |
| <i>R. elongatus</i> , n. s., Walcott, 1884 .....                    | 66-67 |
| <i>R. ellipticus</i> , n. s., Walcott, 1884, pl. xi, fig. 12 .....  | 67    |

*Brachiopoda.*

|                                                                           |       |
|---------------------------------------------------------------------------|-------|
| <i>Obolus</i> , Billings .....                                            | 67    |
| <i>O. ? ambigua</i> , n. s., Walcott, 1884, pl. i, figs. 2 a-c .....      | 67-68 |
| <i>Schizambon</i> , n. g., Walcott, 1884 .....                            | 69-70 |
| <i>S. typicalis</i> , n. s., Walcott, 1884, pl. i, figs. 3 a-d .....      | 70-71 |
| <i>Strophomena</i> , Rafinesque .....                                     | 71    |
| <i>S. nemea</i> , H. & W., 1877 .....                                     | 71    |
| <i>Orthis</i> , Dalman .....                                              | 72    |
| <i>O. perveta</i> , Conrad, 1843, pl. xi, figs. 3 a, b .....              | 72    |
| <i>O. testudinaria</i> , Dalman, 1827, pl. xi, figs. 10, 10 a .....       | 72-73 |
| <i>O. hamburgensis</i> , n. s., Walcott, 1884, pl. xi, figs. 5, 5 a ..... | 73    |
| <i>O. lonensis</i> , n. s., Walcott, 1884, pl. xi, figs. 6, 6 a .....     | 74    |
| <i>O. tricrenaria</i> , Conrad, 1843, pl. xi, figs. 4, 4 a .....          | 74-75 |
| <i>Streptorhynchus</i> , King .....                                       | 75    |
| <i>S. minor</i> , n. s., Walcott, 1884, pl. xi, fig. 9 .....              | 75    |
| <i>Freplexia</i> , Hall .....                                             | 75    |
| <i>T. calcifera</i> , Billings, 1861, pl. xi, figs. 7, 8 .....            | 75-76 |

*Lamellibranchiata.*

|                                                                             |       |
|-----------------------------------------------------------------------------|-------|
| <i>Tellinomya</i> , Hall .....                                              | 76    |
| <i>T. contracta</i> , Salter ? 1859, pl. xi, figs. 15, 15 a .....           | 76    |
| <i>T. ? hamburgensis</i> , n. s., Walcott, 1884, pl. xi, figs. 1, 1 a ..... | 76-77 |
| <i>Modiolopsis</i> , Hall .....                                             | 77    |

|                                                                                            | Page. |
|--------------------------------------------------------------------------------------------|-------|
| <i>M. occidents</i> , n. s., Walcott, 1884, pl. i, fig. 5, and pl. xi, figs. 14, 14 a..... | 77-78 |
| <i>M. pogonipensis</i> , n. s., Walcott, 1884, pl. i, fig. 6, and pl. xi, fig. 13.....     | 78    |
| <i>Gasteropoda.</i>                                                                        |       |
| <i>Raphistoma</i> , Hall.....                                                              | 78    |
| <i>R. nasoni</i> , Hall, 1861, pl. xi, figs. 21, 21 a.....                                 | 78-79 |
| <i>Murchisonia</i> , D'Archiac and De Verneuil.....                                        | 79    |
| <i>M. milleri</i> , Hall? 1877, pl. i, figs. 12, 12 a, b.....                              | 79-80 |
| <i>Pleurotomaria</i> , DeFrance.....                                                       | 80    |
| <i>P. lonensis</i> , n. s., Walcott, 1884, pl. xi, fig. 22.....                            | 80    |
| <i>Helicotoma</i> , Salter.....                                                            | 81    |
| <i>Helicotoma</i> , sp. ? Walcott, 1884.....                                               | 81    |
| <i>Maclurea</i> , Le Sueur.....                                                            | 81    |
| <i>M. annulata</i> , n. s., Walcott, 1884, pl. xi, figs. 19, 19 a.....                     | 81-82 |
| <i>M. subannulata</i> , n. s., Walcott, 1884, pl. xi, figs. 18, 18 a, b.....               | 82    |
| <i>M. carinata</i> , n. s., Walcott, 1884, pl. xi, figs. 20, 20 a.....                     | 82-83 |
| <i>Maclurea</i> , sp. ? Walcott, 1884.....                                                 | 83    |
| <i>Metoptoma</i> , Phillips.....                                                           | 83    |
| <i>M. phillipsi</i> , n. s., Walcott, 1884, pl. i, figs. 4, 4 a.....                       | 83-84 |
| <i>M. ? analoga</i> , n. s., Walcott, 1884, pl. i, figs. 11, 11 a.....                     | 84    |
| <i>Cyrtolites</i> , Conrad.....                                                            | 84    |
| <i>C. sinuatus</i> , H. & W., 1877.....                                                    | 84    |
| <i>Pteropoda.</i>                                                                          |       |
| <i>Coleoprion</i> , Sandberger.....                                                        | 85    |
| <i>C. minuta</i> , n. s., Walcott, 1884, pl. xi, figs. 17, 17 a, and pl. xii, fig. 21..... | 85    |
| <i>Hyolithes</i> , Eichwald.....                                                           | 85    |
| <i>H. vanuxemi</i> , n. s., Walcott, 1884, pl. xi, figs. 16, 16 a, b.....                  | 85-86 |
| <i>Cephalopoda.</i>                                                                        |       |
| <i>Orthoceras</i> , pl. xii, figs. 1, 1 a-c, 2, 3.....                                     | 86    |
| <i>Endoceras proteiforme</i> , Hall? 1847, pl. xii, figs. 1, 1 a-c.....                    | 86    |
| <i>Orthoceras multicameratum</i> , Hall? 1847, pl. xii, fig. 3.....                        | 86    |
| <i>Orthoceras</i> , sp. ? Walcott, 1884, pl. xii, fig. 2.....                              | 86    |
| <i>Endoceras multitubulatum</i> , Hall? 1847.....                                          | 87    |
| <i>Orthoceras</i> , Walcott, 1884, pl. xii, fig. 1 b and figs. 1, 2, p. 87.....            | 87    |
| <i>Crustacea.</i>                                                                          |       |
| <i>Leperditia</i> , Rouault.....                                                           | 88    |
| <i>L. biria</i> , White, 1874.....                                                         | 88    |
| <i>Beyrichia</i> , McCoy.....                                                              | 88    |
| <i>Beyrichia</i> , sp. ? Walcott, 1884.....                                                | 88    |
| <i>Plumulites</i> , Barrande.....                                                          | 88    |
| <i>Poecilopoda</i> .....                                                                   | 89    |
| <i>Dicelloccephalus</i> , Owen.....                                                        | 89    |
| <i>D. finalis</i> , n. s., Walcott, 1884, pl. xii, figs. 12, 12 a, b.....                  | 89-90 |
| <i>D. inexpectans</i> , n. s., Walcott, 1884, pl. i, fig. 10.....                          | 90    |
| <i>Ptychoparia</i> , Corda.....                                                            | 91    |
| <i>P. ? annectans</i> , n. s., Walcott, 1884, pl. xii, fig. 18.....                        | 91    |
| <i>Bathyrurus</i> , Billings.....                                                          | 91    |
| <i>B. ? tuberculatus</i> , n. s., Walcott, 1884, pl. xii, fig. 9.....                      | 91-92 |
| <i>B. ? congeneris</i> , n. s., Walcott, 1884, pl. xii, fig. 8.....                        | 92-93 |
| <i>B. ? simillimus</i> , n. s., Walcott, 1884, pl. xii, fig. 11.....                       | 93    |
| <i>Cyphaspis</i> , Burmeister.....                                                         | 93    |
| <i>C. ? brevimarginatus</i> , n. s., Walcott, 1884, pl. xii, fig. 10.....                  | 93-94 |
| <i>Amphion</i> , Pander.....                                                               | 94    |
| <i>A. nevadensis</i> , n. s., Walcott, 1884, pl. xii, fig. 13.....                         | 94    |
| <i>Ceraurus</i> , Green.....                                                               | 95    |
| <i>Ceraurus</i> — ? Walcott, 1884, pl. xii, fig. 17.....                                   | 95    |
| <i>Symphysurus</i> , Goldfuss.....                                                         | 95    |
| <i>S. ? goldfussi</i> , n. s., Walcott, 1884, pl. xii, fig. 16.....                        | 95    |
| <i>Barrandia</i> , McCoy.....                                                              | 96    |
| <i>B. mccoysi</i> , n. s., Walcott, 1884, pl. xii, fig. 5.....                             | 96    |
| <i>Barrandia</i> ? sp. ? Walcott, 1884, pl. xii, fig. 6.....                               | 96-97 |
| <i>Illænurus</i> , Hall.....                                                               | 97    |
| <i>I. eurekaensis</i> , n. s., Walcott, 1884, pl. xii, figs. 4, 4 a.....                   | 97-98 |
| <i>Asaphus</i> , Brongniart.....                                                           | 98    |
| <i>A. caribouensis</i> , n. s., Walcott, 1884, pl. xii, figs. 7, 7 a, b.....               | 98    |
| <i>A. ? curiosa</i> , Billings, 1865, pl. xii, fig. 15.....                                | 98    |



|                                                                                        | Page.   |
|----------------------------------------------------------------------------------------|---------|
| FOSSILS OF THE DEVONIAN.                                                               |         |
| <i>Porifera.</i>                                                                       |         |
| <i>Palæomanon</i> , Roemer .....                                                       | 99      |
| <i>P. roemeri</i> , n. s., Walcott, 1884, pl. xiii, fig. 12.....                       | 99      |
| <i>Astylospongia</i> , Roemer .....                                                    | 99      |
| <i>Astylospongia</i> , sp. ? Walcott, 1884 .....                                       | 99      |
| <i>Stromatopora</i> , Goldfuss .....                                                   | 100     |
| <i>Actinozoa.</i>                                                                      |         |
| <i>Favosites hemispherica</i> , Yandell & Shumard, 1876.....                           | 100     |
| <i>Favosites basaltico</i> , Goldfuss, 1829 .....                                      | 100-101 |
| <i>Favosites</i> , n. sp., Walcott, 1884.....                                          | 101     |
| <i>Fistulipora</i> , sp. ? Walcott, 1884.....                                          | 101     |
| <i>Alveolites rockfordensis</i> , Hall ? 1864.....                                     | 102     |
| <i>Cladopora pulchra</i> , Rominger ? 1876.....                                        | 102     |
| <i>Cladopora</i> , sp. undt., Walcott, 1884.....                                       | 102     |
| <i>Thecia ramosa</i> , Rominger ? 1876.....                                            | 102-103 |
| <i>Syringopora hisingeri</i> , Billings, 1859.....                                     | 103     |
| <i>Syringopora perelegans</i> , Billings, 1859.....                                    | 103     |
| <i>Aulopora serpens</i> , Goldfuss ? .....                                             | 103     |
| <i>Cyathophyllum corniculum</i> , Milne-Edwards ? .....                                | 104     |
| <i>Cyathophyllum rugosum</i> , Edwards and Haime, 1876 .....                           | 104     |
| <i>Cyathophyllum davidsoni</i> , Milne-Edwards, 1876 .....                             | 105     |
| <i>Cyathophyllum</i> , n. s., Walcott, 1884.....                                       | 104-105 |
| <i>Cyathophyllum</i> , n. s., Walcott, 1884 .....                                      | 105     |
| <i>Acervularia pentagona</i> , Goldfuss, 1877 .....                                    | 105     |
| <i>Pachyphyllum woodmani</i> (White), H. & W., 1864.....                               | 105     |
| <i>Diphyphyllum simcoense</i> , Billings, 1876.....                                    | 105-106 |
| <i>Cystiphyllum americanum</i> , Milne-Edwards, 1876.....                              | 106     |
| <i>Cystiphyllum</i> , n. s., Walcott, 1884 .....                                       | 106     |
| <i>Brachiopoda.</i>                                                                    |         |
| <i>Lingula</i> , Bruguière .....                                                       | 106     |
| <i>L. læna</i> , Hall, 1867, pl. xiii, fig. 2.....                                     | 106-107 |
| <i>L. ligea</i> , Hall, 1860, pl. ii, fig. 2.....                                      | 107     |
| <i>L. ligea</i> , var. <i>nevadensis</i> , n. var., Walcott, 1884, pl. ii, fig. 3..... | 107     |
| <i>L. alba-pinensis</i> , n. s., Walcott, 1884, pl. ii, figs. 1, 1 <i>a</i> .....      | 108     |
| <i>L. lonensis</i> , n. s., Walcott, 1884, pl. xiii, figs. 1, 1 <i>a</i> .....         | 108-109 |
| <i>L. whitei</i> , n. s., Walcott, 1884, pl. xiii, fig. 3.....                         | 109-111 |
| <i>Discina</i> , Lamarck .....                                                         | 112     |
| <i>D. minuta</i> , Hall, 1843, pl. xiii, fig. 5 .....                                  | 112     |
| <i>Discina</i> , sp. ? Walcott, 1884.....                                              | 112     |
| <i>D. lodensis</i> , Hall, 1843, pl. ii, figs. 5, 5 <i>a</i> .....                     | 112-113 |
| <i>Pholidops</i> , Hall .....                                                          | 113     |
| <i>P. bellula</i> , n. s., Walcott, 1884, pl. ii, figs. 6, 6 <i>a</i> , <i>b</i> ..... | 113-114 |
| <i>P. quadrangularis</i> , n. s., Walcott, 1884, pl. ii, fig. 7.....                   | 114     |
| <i>Orthis</i> , Dalman .....                                                           | 114     |
| <i>O. mcfarlanei</i> , Meek, 1868 .....                                                | 114     |
| <i>O. impressa</i> , Hall, 1843, pl. xiii, fig. 13 .....                               | 115     |
| <i>O. tulliensis</i> , Vanuxem, 1842, pl. ii, figs. 12, 12 <i>a</i> .....              | 115-116 |
| <i>Skenidium</i> , Hall .....                                                          | 116     |
| <i>S. devonicum</i> , n. s., Walcott, 1884, pl. xiii, figs. 4, 4 <i>a</i> .....        | 116     |
| <i>Streptorhynchus</i> , King .....                                                    | 117     |
| <i>S. chemungensis</i> , Conrad sp., 1842, pl. xiii, figs. 7 and 16 .....              | 117-118 |
| <i>Strophomena</i> , Blainville .....                                                  | 118     |
| <i>S. rhomboidalis</i> , Wicckens, sp.....                                             | 118     |
| <i>Strophodonta</i> , Hall .....                                                       | 118     |
| <i>S. demissa</i> , Conrad, sp., 1842, pl. ii, figs. 9, 9 <i>a</i> , <i>b</i> .....    | 118-119 |
| <i>S. patersoni</i> , Hall, 1857.....                                                  | 119     |
| <i>S. inequiradiata</i> , Hall, 1857, pl. xi, figs. 11, 11 <i>a</i> .....              | 120     |
| <i>S. perplana</i> , Conrad, sp., 1842, pl. xiii, fig. 11.....                         | 120-121 |
| <i>S. punctulifera</i> , Conrad, sp., pl. xiii, fig. 10.....                           | 121     |
| <i>S. arcuata</i> , Hall ? 1858.....                                                   | 121     |
| <i>S. calvini</i> , Miller, 1883, pl. xiii, fig. 6 .....                               | 122     |
| <i>Chonetes</i> , Fischer.....                                                         | 122-123 |
| <i>C. hemispherica</i> , Hall, 1857 .....                                              | 123     |
| <i>C. deflecta</i> , Hall, 1857, pl. ii, figs. 8, 8 <i>a</i> , <i>b</i> .....          | 124     |

|                                                                                                                               | Page.   |
|-------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>C. mucronata</i> , Hall?, 1843 .....                                                                                       | 124-125 |
| <i>C. setigera</i> , Hall, 1843 .....                                                                                         | 125     |
| <i>C. macrostriata</i> , n. s., Walcott, 1884, pl. ii, fig. 13, pl. xiii, figs. 14, 14 a-c .....                              | 126-127 |
| <i>C. filistriata</i> , n. s., Walcott, 1884, pl. xiii, figs. 15, 15 a .....                                                  | 127-128 |
| <i>Productus</i> , Sowerby .....                                                                                              | 128     |
| Subgenus <i>Productella</i> , Hall, 1867 .....                                                                                | 128     |
| <i>P. (Productella) subaculeatus</i> , Murch, pl. vii, fig. 2, pl. xiii, figs. 19, 19 a, 20, 20 a .....                       | 128-129 |
| <i>P. (Productella) shumardianus</i> , Hall, 1858, pl. xiv, fig. 1 .....                                                      | 129-130 |
| <i>P. (Productella) hallanus</i> , n. s., Walcott, 1884, pl. xiii, figs. 17, 17 a .....                                       | 130-131 |
| <i>P. (Productella) navicella</i> , Hall, 1857, pl. xiii, fig. 9 .....                                                        | 131     |
| <i>P. (Productella) truncatus</i> , Hall, 1857, pl. xiv, fig. 2 .....                                                         | 131-132 |
| <i>P. (Productella) lachrymosus</i> var. <i>limus</i> , Conrad, sp., 1842, pl. xiii, figs. 18, 18 a .....                     | 132     |
| <i>P. (Productella) lachrymosus</i> var. <i>stigmatus</i> , Hall, 1867 .....                                                  | 132-133 |
| <i>P. (Productella) speciosus</i> , Hall, 1857, pl. xiii, fig. 8 .....                                                        | 133     |
| <i>P. hirsutiforme</i> , n. s., Walcott, 1884, pl. ii, figs. 10, 10 a .....                                                   | 133-134 |
| <i>Spirifera</i> , Sowerby .....                                                                                              | 134     |
| <i>S. disjuncta</i> , Sowerby, 1840 .....                                                                                     | 134-135 |
| <i>S. varicosta</i> , Conrad, sp., 1842, pl. iv, figs. 2, 2 a, pl. xiv, fig. 12 .....                                         | 135     |
| <i>S. varicosa</i> , Hall, 1857 .....                                                                                         | 136     |
| <i>S. parryana</i> , Hall?, 1858, pl. xiv, fig. 10 .....                                                                      | 137     |
| <i>Spirifera</i> (sp. undt.), Walcott, 1884 .....                                                                             | 137     |
| <i>S. englemanni</i> , Meek, 1860 .....                                                                                       | 138     |
| <i>S. pinonensis</i> , Meek, 1870, pl. iv, figs. 1, 1 a-f .....                                                               | 138     |
| Subgenus <i>Martinia</i> , McCoy .....                                                                                        | 139     |
| <i>S. (Martinia) glabra</i> , Martin .....                                                                                    | 139     |
| <i>S. (Martinia) glabra</i> var. <i>nevadensis</i> , n. var. Walcott, 1884, pl. iii, fig. 5, pl. xiv, figs. 14, 14 a, b ..... | 139-140 |
| <i>S. (Martinia) maia</i> , Billings, 1860, pl. iii, figs. 1, 1 a-e, pl. xiv, figs. 13, 13 a .....                            | 141-142 |
| <i>S. (Martinia) undifera</i> , Roemer, 1844, pl. iii, figs. 3, 3 a, b; 6, 6 a, pl. xiv, figs. 11, 11 a, b .....              | 143-146 |
| <i>Cyrtina</i> , Davidson .....                                                                                               | 146     |
| <i>C. davidsoni</i> , n. s., Walcott, 1884, pl. iii, figs. 2, 2 a-e .....                                                     | 146-147 |
| <i>C. hamiltonensis</i> , Hall, 1857 .....                                                                                    | 147     |
| <i>Nucleospira</i> , Hall .....                                                                                               | 147     |
| <i>N. concinni</i> , Hall, 1843 .....                                                                                         | 147     |
| <i>Athyris</i> , McCoy .....                                                                                                  | 148     |
| <i>A. angelica</i> , Hall, 1861 .....                                                                                         | 148     |
| <i>Athyris</i> (sp. undt.), Walcott, 1884 .....                                                                               | 148     |
| <i>Meristella</i> , Hall .....                                                                                                | 148     |
| <i>Whitfieldia</i> , Davidson .....                                                                                           | 148     |
| <i>M. (Whitfieldia) nasuta</i> , Conrad, sp., 1842, pl. iii, fig. 8, 8 a, b .....                                             | 148-149 |
| <i>Atrypa</i> , Dalman .....                                                                                                  | 150     |
| <i>A. reticularis</i> (Linnaeus, sp.), Dalman, pl. xiv, figs. 6, 6 a, b .....                                                 | 150     |
| <i>A. desquamata</i> , Sowerby, pl. xiv, figs. 4, 4 a .....                                                                   | 150-151 |
| <i>Trematospira</i> , Hall .....                                                                                              | 151     |
| <i>T. infrequens</i> , Hall, n. s., Walcott, 1884, pl. iv, figs. 3, 3 a, b .....                                              | 151     |
| <i>Rhynchonella</i> , Fischer .....                                                                                           | 152     |
| <i>R. horsfordi</i> , Hall, 1860, pl. xiv, fig. 3; pl. xv, fig. 6 .....                                                       | 152     |
| <i>R. tethys</i> , Billings, 1860 .....                                                                                       | 152     |
| <i>R. ? occidentis</i> , n. s., Walcott, 1884, pl. xv, figs. 3, 3 a, b .....                                                  | 152-153 |
| <i>R. castanea</i> , Meek, 1868, pl. xv, figs. 1, 1 a; 4, 4 a .....                                                           | 153-155 |
| <i>R. duplicata</i> , Hall, 1843, pl. xiv, fig. 8 .....                                                                       | 155     |
| <i>R. pugnus</i> , Martin, 1809, pl. xiv, figs. 7, 7 a .....                                                                  | 155-157 |
| <i>R. emmonsii</i> , H. & W., 1877 .....                                                                                      | 157     |
| Subgenus <i>Leiorhynchus</i> , Hall .....                                                                                     | 157     |
| <i>R. (Leiorhynchus) nevadensis</i> , n. s., Walcott, 1884, pl. xiv, figs. 9, 9 a, b .....                                    | 157-158 |
| <i>R. (Leiorhynchus) sinuatus</i> , Hall, 1867, pl. xiv, fig. 5 .....                                                         | 158-159 |
| <i>R. (Leiorhynchus) laura</i> , Billings, 1860 .....                                                                         | 159     |
| <i>Pentamerus</i> , Sowerby .....                                                                                             | 159     |
| Subgenus <i>Gypidula</i> , Hall .....                                                                                         | 159     |
| <i>P. comis</i> , Owen, 1852, pl. iii, figs. 4, 7; pl. xiv, figs. 12, 15 a, b; pl. xv, figs. 5, 5 a, b .....                  | 159-161 |
| <i>P. lotis</i> , n. s., Walcott, 1884, pl. iii, figs. 9, 9 a-c .....                                                         | 161-162 |
| <i>Cryptonella</i> , Hall .....                                                                                               | 163     |
| <i>C. ? circularis</i> , n. s., Walcott, 1884, pl. xv, figs. 2, 2 a, b .....                                                  | 163     |
| <i>C. pinonensis</i> , n. s., Walcott, 1884, pl. iv, figs. 4, 4 a, b .....                                                    | 163-164 |

|                                                                                | Page.    |
|--------------------------------------------------------------------------------|----------|
| <i>Lamellibranchiata.</i>                                                      |          |
| <i>Pterinea</i> , Goldfuss                                                     | 165      |
| <i>P. flabella</i> , Conrad, sp. 1842, pl. xv, fig. 12; pl. v, fig. 6          | 165      |
| <i>P. newarkensis</i> , n. s., Walcott, 1884, pl. v, fig. 12                   | 165-166  |
| <i>Actinopteria</i> , Hall                                                     | 166      |
| <i>A. boydi</i> , Conrad, sp., 1842, pl. v, fig. 2                             | 166      |
| <i>Leiopteria</i> , Hall, 1883, pl. v, figs. 10, 10 a                          | 166      |
| <i>L. rafinesquii</i> , Hall, 1883, pl. v, figs. 10, 10 a                      | 166      |
| <i>Leptodesma</i> , Hall                                                       | 167      |
| <i>L. transversa</i> , n. s., Walcott, 1884, pl. v, fig. 13                    | 167      |
| <i>Limoptera</i> , Hall                                                        | 167      |
| <i>L. sarmenticia</i> , n. s., Walcott, 1884, pl. v, figs. 3, 3 a, b           | 167-168  |
| <i>Mytilarca</i> , Hall                                                        | 168      |
| <i>M. dubia</i> , n. s., Walcott, 1884, pl. iv, fig. 5                         | 168      |
| <i>M. chemungensis</i> , Conrad, 1842, pl. iv, fig. 9                          | 168-169  |
| Subgenus <i>Plethomytilus</i> , Hall                                           | 169      |
| <i>M. (Plethomytilus) oviformis</i> , Conrad, 1842, pl. v, fig. 11             | 169      |
| <i>Modiomorpha</i> , Hall                                                      | 169      |
| <i>M. altiforme</i> , n. s., Walcott, 1884, pl. v, fig. 9                      | 169-170  |
| <i>M. oblonga</i> , n. s., Walcott, 1884, pl. v, fig. 7                        | 170      |
| <i>M. obtusa</i> , n. s., Walcott, 1884, pl. iv, figs. 8, 8 a                  | 171      |
| <i>Goniophora</i> , Phillips                                                   | 171      |
| <i>G. perangulata</i> , Hall, 1870, pl. xv, fig. 10                            | 171      |
| <i>Nucula</i> , Lamarek                                                        | 172      |
| <i>N. rescuensis</i> , n. s., Walcott, 1884, pl. xv, fig. 9                    | 172      |
| <i>Nucula</i> , sp. ? Walcott, 1884                                            | 172      |
| <i>Dystactella</i> , Hall                                                      | 172      |
| <i>D. insularis</i> , n. s., Walcott, 1884, pl. xv, fig. 8                     | 172, 173 |
| <i>Megambonia</i> , Hall                                                       | 173      |
| <i>M. occidualis</i> , n. s., Walcott, 1884, pl. v, fig. 1                     | 173      |
| <i>Nyassa</i> , Hall                                                           | 173      |
| <i>N. parva</i> , n. s., Walcott, 1884, pl. xv, figs. 14, 14 a                 | 173, 174 |
| <i>Grammysia</i> , De Verneuil                                                 | 174      |
| <i>G. minor</i> , n. s., Walcott, 1884, pl. xv, figs. 15, 15 a                 | 174-175  |
| <i>Sanguinolites</i> , McCoy                                                   | 175      |
| <i>S. ? combensis</i> , n. s., Walcott, 1884, pl. xv, fig. 16                  | 175      |
| <i>S. ? gracilis</i> , n. s., Walcott, 1884, pl. iv, fig. 10                   | 175-176  |
| <i>S. rigidus</i> , White & Whitfield, 1862, pl. xvi, fig. 6                   | 176      |
| <i>S. ? sandaskgensis</i> , Meek, 1871, pl. v, fig. 1                          | 176-177  |
| <i>S. ventricosus</i> , White & Whitfield, sp., 1862, pl. xv, fig. 13          | 177      |
| <i>Conocardium</i> , Brown                                                     | 177      |
| <i>C. nevadensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 4, 4 a             | 177-178  |
| <i>Paracylus</i> , Hall                                                        | 178      |
| <i>P. occidentalis</i> , H. & W., 1872                                         | 178      |
| <i>Posidonia</i> , Bronn                                                       | 178      |
| <i>P. lævis</i> , n. s., Walcott, 1884, pl. iv, fig. 6                         | 178-179  |
| <i>P. devonica</i> , n. s., Walcott, 1884, pl. iv, fig. 7                      | 179-180  |
| <i>Micradon</i> , Conrad                                                       | 180      |
| Subgenus <i>Cypricardella</i> , Hall                                           | 180      |
| <i>M. (Cypricardella) macrostriatus</i> , n. s., Walcott, 1884, pl. v, fig. 5  | 180      |
| <i>Anodontopsis</i> , McCoy                                                    | 180      |
| <i>A. amygdaleformis</i> , n. s., Walcott, 1884, pl. xv, figs. 7, 7 a, b       | 180-181  |
| <i>Schizodus</i> , King                                                        | 181      |
| Subgenus <i>Cytherodon</i> , Hall                                              | 181      |
| <i>S. (Cytherodon) orbicularis</i> , n. s., Walcott, 1884, pl. v, figs. 8, 8 a | 181      |
| <i>Cypricardina</i> , Hall                                                     | 182      |
| <i>C. indenta</i> , Conrad, sp., 1842, pl. v, fig. 14; pl. xv, fig. 11         | 182      |
| <i>Gasteropoda.</i>                                                            |          |
| <i>Platyceras</i> , Conrad                                                     | 182      |
| <i>P. conradi</i> , n. s., Walcott, 1884, pl. xvi, figs. 1, 1 a                | 182-183  |
| <i>P. nodosum</i> , Conrad, 1841, pl. vi, figs. 5, 5 a, b                      | 183      |
| <i>P. undulatum</i> , n. s., Walcott, 1884, pl. vi, figs. 2, 2 a               | 184      |
| <i>P. thetiforme</i> , n. s., Walcott, 1884, pl. vi, figs. 4, 4 a, b           | 184      |
| <i>Platystrophia</i> , Conrad                                                  | 185      |
| <i>P. lineatum</i> , Conrad, 1842                                              | 185      |



|                                                                                               | Page.   |
|-----------------------------------------------------------------------------------------------|---------|
| <i>Euomphalus</i> , Sowerby .....                                                             | 185     |
| <i>E. eurekaensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 2, 2 <i>a</i> .....              | 185-186 |
| <i>E. (Planerotinus) laxus</i> , Hall, 1861, pl. vi, fig. 3. ....                             | 186     |
| <i>Ecculomphalus</i> , Portlock .....                                                         | 187     |
| <i>E. devonicus</i> , n. s., Walcott, 1884, pl. vi, figs. 6, 6 <i>a</i> .....                 | 187     |
| <i>Straparollus</i> , Montfort .....                                                          | 187     |
| <i>S. newarkensis</i> , n. s., Walcott, 1884, pl. xvi, figs. 7, 7 <i>a</i> .....              | 187-188 |
| <i>Platyschisma</i> , McCoy .....                                                             | 188     |
| <i>P. ? McCoyi</i> , n. s., Walcott, 1884, pl. xvii, figs. 1, 1 <i>a-c</i> .....              | 188     |
| <i>P. ? ambiguum</i> , n. s., Walcott, 1884, pl. xvii, figs. 3, 3 <i>a</i> .....              | 188-189 |
| <i>Callonema</i> , Hall .....                                                                 | 189     |
| <i>C. occidentalis</i> , n. s., Walcott, 1884, pl. xvi, figs. 3, 3 <i>a</i> .....             | 189     |
| <i>Loxonema</i> , Phillips .....                                                              | 190     |
| <i>L. eurekaensis</i> , n. s., Walcott, 1884, pl. xvi, fig. 8 .....                           | 190     |
| <i>L. nobile</i> , n. s., Walcott, 1884, pl. xvi, fig. 9 .....                                | 190-191 |
| <i>L. ? subattenuatum</i> , Hall ? 1861 .....                                                 | 191     |
| <i>L. approximatum</i> , n. s., Walcott, 1884, pl. vi, fig. 7 .....                           | 191-192 |
| <i>Loxonema</i> ? sp. undt., Walcott, 1884 .....                                              | 192     |
| <i>Loxonema</i> , sp. undt., Walcott, 1884 .....                                              | 192     |
| <i>Bellerophon</i> , Montfort .....                                                           | 192     |
| <i>B. perplexa</i> , n. s., Walcott, 1884, pl. xvii, figs. 6, 6 <i>a, b</i> .....             | 193     |
| <i>B. combsi</i> , n. s., Walcott, 1884, pl. xvii, figs. 9, 9 <i>a, b</i> .....               | 193-194 |
| <i>B. lyra</i> , Hall .....                                                                   | 194     |
| <i>B. leda</i> , Hall .....                                                                   | 194     |
| <i>B. mæra</i> , Hall ? .....                                                                 | 194     |
| <i>B. pelops</i> , Hall ? .....                                                               | 194     |
| <i>Scoliotoma</i> , Braun .....                                                               | 195     |
| <i>S. americana</i> , n. s., Walcott, 1884, pl. vi, figs. 1, 1 <i>a-c</i> .....               | 195     |
| <i>Metoptoma</i> , Phillips .....                                                             | 195     |
| <i>M. ? devonica</i> , n. s., Walcott, 1884, pl. xvii, figs. 2, 2 <i>a</i> .....              | 195-196 |
| <i>Pteropoda.</i>                                                                             |         |
| <i>Tentaculites</i> , Schlotheim .....                                                        | 196     |
| <i>T. gracilistriatus</i> , Hall .....                                                        | 196-197 |
| <i>T. scalariformis</i> , Hall .....                                                          | 197     |
| <i>T. attenuatus</i> , Hall .....                                                             | 197     |
| <i>T. bellulus</i> , Hall ? .....                                                             | 197     |
| <i>Styliola</i> , Le Sueur .....                                                              | 197     |
| <i>S. fissurella</i> , Hall .....                                                             | 197     |
| <i>S. fissurella</i> var. <i>intermittens</i> , Hall .....                                    | 197-198 |
| <i>Conularia</i> , Miller .....                                                               | 198     |
| <i>Conularia</i> , sp. undt., Walcott, 1884 .....                                             | 198     |
| <i>Hyolithes</i> , Eichwald .....                                                             | 199     |
| <i>Hyolithes</i> , sp. (?), Walcott, 1884, pl. vi, figs. 8, 8 <i>a</i> .....                  | 199     |
| <i>Coleolus</i> , Hall .....                                                                  | 199     |
| <i>C. lævis</i> , n. s., Walcott, 1884, pl. vi, fig. 9 .....                                  | 199-200 |
| <i>Cephalopoda.</i>                                                                           |         |
| <i>Orthoceras</i> , Breynius .....                                                            | 200-202 |
| <i>Gomphoceras</i> , Sowerby .....                                                            | 202     |
| <i>G. suboviforme</i> , n. s., Walcott, 1884, pl. xvii, figs. 8, 8 <i>a</i> .....             | 202-203 |
| <i>Cyrtoceras</i> , Goldfuss .....                                                            | 203     |
| <i>C. nevadense</i> , n. s., Walcott, 1884, pl. xvii, figs. 7, 7 <i>a</i> .....               | 203     |
| <i>Goniatites</i> , De Haan .....                                                             | 203     |
| <i>G. desideratus</i> , n. s., Walcott, 1884, pl. xvii, fig. 10 .....                         | 203-204 |
| <i>Crustacea.</i>                                                                             |         |
| <i>Beyrichia</i> , McCoy .....                                                                | 204     |
| <i>B. (Primitia) occidentalis</i> , n. s., Walcott, 1884, pl. xvii, figs. 4, 4 <i>a</i> ..... | 204-206 |
| <i>Leperditia</i> , Rouault .....                                                             | 206     |
| <i>L. rotundata</i> , n. s., Walcott, 1884, pl. xvi, fig. 5 .....                             | 206     |
| <i>Pæcilopoda.</i>                                                                            |         |
| <i>Phacops</i> , Emmerich .....                                                               | 207     |
| <i>P. rana</i> , Green, sp., 1892 .....                                                       | 207     |
| <i>Dalmanites</i> , Emmerich .....                                                            | 207     |
| <i>D. meeki</i> , n. s., Walcott, 1884, pl. xvii, figs. 5, 5 <i>a-c</i> .....                 | 207-209 |
| <i>Dalmanites</i> , undt. sp., Walcott, 1884 .....                                            | 210     |
| <i>Præctus</i> , Steininger .....                                                             | 210     |



|                                                                                                        | Page.   |
|--------------------------------------------------------------------------------------------------------|---------|
| <i>P. haldemani</i> , Hall, 1861 .....                                                                 | 210     |
| <i>P. marginalis</i> , Conrad, sp., 1839 .....                                                         | 210-211 |
| <i>Phillipsia</i> , Portlock .....                                                                     | 211     |
| <i>P. coronata</i> , Hall ? 1876 .....                                                                 | 211     |
| Supposed eggs of the Trilobite .....                                                                   | 211     |
| FOSSILS OF THE CARBONIFEROUS.                                                                          |         |
| <i>Echinodermata</i> .                                                                                 |         |
| <i>Archæocidaris</i> , McCoy .....                                                                     | 212     |
| <i>Archæocidaris</i> , sp., ? Walcott, 1884 .....                                                      | 212-213 |
| <i>Brachiopoda</i> .                                                                                   |         |
| <i>Discina</i> , Lamarck .....                                                                         | 213     |
| <i>D. newberryi</i> , Hall, 1863, pl. xviii, figs. 3, 2, 2 <i>a</i> ? .....                            | 213     |
| <i>D. nitida</i> , Phillips, 1836, pl. vii, figs. 4, 4 <i>a</i> .....                                  | 213-214 |
| <i>D. connata</i> , n. s., Walcott, 1884, pl. vii, fig. 3, 3 <i>a</i> .....                            | 214     |
| <i>Productus</i> , Sowerby .....                                                                       | 214     |
| <i>P. subaculeatus</i> , Murch., pl. vii, fig. 2 .....                                                 | 214-215 |
| <i>Spirifera</i> , Sowerby .....                                                                       | 215     |
| <i>S. trigonalis</i> , Martin, sp., 1809, pl. xviii, fig. 11 .....                                     | 215-216 |
| <i>S. leidyi</i> , N. & P., 1855, pl. xviii, figs. 4, 4 <i>a</i> .....                                 | 216     |
| <i>S. annectans</i> , n. s., Walcott, 1884, pl. xviii, figs. 7, 7 <i>a</i> .....                       | 216-217 |
| <i>S. neglecta</i> , Hall, 1858, pl. xviii, fig. 10 .....                                              | 217     |
| <i>S. desiderata</i> , n. s., Walcott, 1884, pl. vii, fig. 8 .....                                     | 217-218 |
| Subgenus <i>Spiriferina</i> , D'Orbigny .....                                                          | 218     |
| <i>S. (Spiriferina) cristata</i> , Schlottheim, 1816, pl. xviii, figs. 12, 13 .....                    | 218-219 |
| <i>Syringothyris</i> , Winchell .....                                                                  | 219     |
| <i>S. cuspidata</i> , Martin, sp., 1796 .....                                                          | 219-220 |
| <i>Retzia</i> , King .....                                                                             | 220     |
| <i>R. radialis</i> , Phillips, sp., 1836, pl. vii, figs. 5, 5 <i>a-h</i> .....                         | 220-222 |
| <i>Athyris</i> , McCoy .....                                                                           | 222     |
| <i>A. hirsuta</i> , Hall, 1857, pl. xviii, fig. 5 .....                                                | 222     |
| <i>Rhynchonella</i> , Fischer .....                                                                    | 223     |
| <i>R. eurekaensis</i> , n. s., Walcott, 1884, pl. xviii, figs. 8, 8 <i>a-c</i> .....                   | 223     |
| <i>R. thera</i> , n. s., Walcott, 1884, pl. vii, figs. 6, 6 <i>a-c</i> .....                           | 223-224 |
| <i>Camarophoria</i> , King .....                                                                       | 224     |
| <i>C. cooperensis</i> , Shumard, 1855, pl. xviii, fig. 6 .....                                         | 224     |
| <i>Terebratula</i> , Llhwyd .....                                                                      | 224     |
| <i>T. hastata</i> , Sowerby .....                                                                      | 224     |
| <i>Lamellibranchiata</i> .                                                                             |         |
| <i>Aviculopecten</i> , McCoy .....                                                                     | 226     |
| <i>A. haguei</i> , n. s., Walcott, 1884, pl. xix, fig. 4 .....                                         | 226-227 |
| <i>A. eurekaensis</i> , n. s., Walcott, 1884, pl. xix, figs. 2, 3 .....                                | 227     |
| <i>A. peroccidens</i> , n. s., Walcott, 1884, pl. xviii, fig. 8 .....                                  | 227-228 |
| <i>A. pintöensis</i> , n. s., Walcott, 1884, pl. xviii, fig. 6 .....                                   | 228     |
| <i>A. affinis</i> , n. s., Walcott, 1884, pl. xix, figs. 1, 1 <i>a</i> .....                           | 229-230 |
| <i>Aviculopecten</i> , sp.? Walcott, 1884 .....                                                        | 230     |
| <i>Streblapteria</i> , McCoy .....                                                                     | 230     |
| <i>S. similis</i> , n. s., Walcott, 1884, pl. xviii, figs. 4, 4 <i>a-d</i> , and pl. xix, fig. 7 ..... | 230-231 |
| <i>Crenipecten</i> , Hall .....                                                                        | 231     |
| <i>C. hallanus</i> , n. s., Walcott, 1884, pl. xviii, figs. 7, 7 <i>a-c</i> .....                      | 231-232 |
| <i>Pterinopecten</i> , Hall .....                                                                      | 232     |
| <i>P. hoosacensis</i> , n. s., Walcott, 1884, pl. xviii, fig. 9 .....                                  | 232-233 |
| <i>P. spio</i> , n. s., Walcott, 1884, pl. xviii, figs. 1, 1 <i>a</i> .....                            | 233     |
| <i>Pterinea</i> , Goldfuss .....                                                                       | 234     |
| <i>P. pintöensis</i> , n. s., Walcott, 1884, pl. xix, fig. 10 .....                                    | 234     |
| <i>Leptodesma</i> , Hall .....                                                                         | 234     |
| <i>Leptodesma</i> , sp.? Walcott, 1884 .....                                                           | 234     |
| <i>Ptychopteria</i> , Hall .....                                                                       | 235     |
| <i>P. protoforme</i> , n. s., Walcott, 1884, pl. xviii, fig. 5 .....                                   | 235     |
| <i>Pinna</i> , Linnæus .....                                                                           | 235     |
| <i>P. inexpectans</i> , n. s., Walcott, 1884, pl. xix, fig. 11 .....                                   | 235-236 |
| <i>P. consimilis</i> , n. s., Walcott, 1884, pl. xx, fig. 13 .....                                     | 236     |
| <i>Myalina</i> , De Koninck .....                                                                      | 237     |
| <i>M. congeneris</i> , n. s., Walcott, 1884, pl. xix, fig. 6, and pl. xxii, fig. 10 .....              | 237     |
| <i>M. nemesis</i> , n. s., Walcott, 1884, pl. xix, fig. 5, and pl. xxii, fig. 7 .....                  | 237-238 |
| <i>M. nesusus</i> , n. s., Walcott, 1884, pl. xxii, figs. 8, 8 <i>a</i> .....                          | 238     |

|                                                                                                             | Page.   |
|-------------------------------------------------------------------------------------------------------------|---------|
| <i>Modiola</i> , Lamarck .....                                                                              | 239     |
| <i>M. ? nevadensis</i> , n. s., Walcott, 1884, pl. xix, fig. 8.....                                         | 239     |
| <i>Modiomorpha</i> , Hall .....                                                                             | 239     |
| <i>M. ambigua</i> , n. s., Walcott, 1884, pl. xx, fig. 1 .....                                              | 239-240 |
| <i>M. ? desiderata</i> , n. s., Walcott, 1884, pl. xx, fig. 3.....                                          | 240     |
| <i>M. ? pintoensis</i> , n. s., Walcott, 1884, pl. xx, fig. 2.....                                          | 240-241 |
| <i>Nucula</i> , Lamarck .....                                                                               | 241     |
| <i>N. insularis</i> , n. s., Walcott, 1884, pl. xx, fig. 14 .....                                           | 240     |
| <i>N. levatiforme</i> , n. s., Walcott, 1884, pl. xxii, figs. 1, 1 a.....                                   | 241-242 |
| <i>Solenomya</i> , Lamarck .....                                                                            | 242     |
| <i>S. curta</i> , n. s., Walcott, 1884, pl. xxii, figs. 6, 11.....                                          | 242     |
| <i>Macrodon</i> , Lycett .....                                                                              | 243     |
| <i>M. hamiltonae</i> , Hall, 1870, pl. xxiii, figs. 5, 5 a-c .....                                          | 243     |
| <i>M. truncatus</i> , n. s., Walcott, 1884, pl. viii, fig. 2.....                                           | 243-244 |
| <i>Grammysia</i> , De Verneuil .....                                                                        | 244     |
| <i>G. hamibalisensis</i> , Shumard, sp., 1855, pl. xx, fig. 4.....                                          | 244     |
| <i>G. arcuata</i> , Conrad, sp., 1841, pl. xx, fig. 5 .....                                                 | 245     |
| <i>Edmondia</i> , De Koninck .....                                                                          | 245     |
| <i>E. medon</i> , n. s., Walcott, 1884, pl. xxiii, fig. 6 .....                                             | 245     |
| <i>E. ? circularis</i> , n. s., Walcott, 1884, pl. xxii, fig. 9.....                                        | 246     |
| <i>Pleurophorus</i> , King.....                                                                             | 246     |
| <i>P. meeki</i> , n. s., Walcott, 1884, pl. viii, fig. 3.....                                               | 246     |
| <i>Sanguinolites</i> , McCoy.....                                                                           | 247     |
| <i>S. æolus</i> , H. & W., 1870, pl. xx, figs. 6, 7, 9 .....                                                | 247     |
| <i>S. retusus</i> , n. s., Walcott, 1884, pl. xx, fig. 10.....                                              | 247-248 |
| <i>S. simplex</i> , n. s., Walcott, 1884, pl. xx, fig. 11 .....                                             | 248     |
| <i>S. salteri</i> , n. s., Walcott, 1884, pl. xx, fig. 12 .....                                             | 248-249 |
| <i>S. ? nœnia</i> , n. s., Walcott, 1884, pl. xix, fig. 9.....                                              | 249     |
| <i>S. striatus</i> , n. s., Walcott, 1884, pl. xxiii, fig. 7.....                                           | 249-250 |
| <i>Microdon</i> , Conrad .....                                                                              | 250     |
| Subgenus <i>Cypricardella</i> , Hall .....                                                                  | 250     |
| <i>M. (Cypricardella) connatus</i> , n. s., Walcott, 1884, pl. xxiv, figs. 5, 5 a .....                     | 250-251 |
| <i>Cardiola</i> , Broderip.....                                                                             | 251     |
| <i>C. ? filicostata</i> , n. s., Walcott, 1884, pl. xxii, figs. 4, 4 a.....                                 | 251     |
| <i>Schizodus</i> , King .....                                                                               | 252     |
| <i>S. cuneatus</i> , Meek, 1875, pl. xx, fig. 8 .....                                                       | 252     |
| <i>S. deparcus</i> , n. s., Walcott, 1884, pl. xxii, fig. 5 .....                                           | 252     |
| <i>S. curtiforme</i> , n. s., Walcott, 1884, pl. xxii, figs. 3, 3 a.....                                    | 253     |
| <i>S. pintoensis</i> , n. s., Walcott, 1884, pl. xxii, figs. 2, 2 a.....                                    | 253-254 |
| <i>Gasteropoda.</i>                                                                                         |         |
| <i>Platyceras</i> , Conrad .....                                                                            | 254     |
| <i>P. occidens</i> , n. s., Walcott, 1884, pl. xxiv, figs. 9, 9 a.....                                      | 254     |
| <i>P. piso</i> , n. s., Walcott, 1884, pl. xxiv, figs. 7, 7 a, b .....                                      | 254-255 |
| <i>Platystoma</i> , Conrad .....                                                                            | 255     |
| <i>P. inornatum</i> , n. s., Walcott, 1884, pl. xxiv, figs. 3, 3 a.....                                     | 255     |
| <i>Euomphalus</i> , Sowerby .....                                                                           | 255     |
| <i>E. (Straparollus) subrugosus</i> , M. & W., 1873, pl. xviii, fig. 19 .....                               | 255-256 |
| <i>Bellerophon</i> , Montfort .....                                                                         | 256     |
| <i>B. majusculus</i> , n. s., Walcott, 1884, pl. xxiii, figs. 1, 1 a; pl. xxiv, fig. 6, and fig. 3, p. 257. | 256-257 |
| <i>B. textilis</i> , Hall, ? 1877, pl. xviii, fig. 18.....                                                  | 257-258 |
| <i>Loxonema</i> , Phillips .....                                                                            | 258     |
| <i>L. bella</i> , n. s., Walcott, 1884, pl. xxiv, figs. 1, 1 a .....                                        | 258-259 |
| <i>Pleurotomaria</i> , DeFrance .....                                                                       | 259     |
| <i>P. nodomarginata</i> , McCheyney, 1860, pl. xviii, fig. 15 .....                                         | 259     |
| <i>P. nevadensis</i> , n. s., Walcott, 1884, pl. xxiv, figs. 2, 2 a.....                                    | 259-260 |
| <i>Macrocheilus</i> , Phillips.....                                                                         | 260     |
| <i>Macrocheilus</i> , sp., ? Walcott, 1884, pl. xxiv, fig. 8 .....                                          | 260     |
| <i>Metoptoma</i> , Phillips.....                                                                            | 260     |
| <i>M. peroccidens</i> , n. s., Walcott, 1884, pl. xviii, fig. 16 .....                                      | 260     |
| <i>Ampullaria</i> , Lamarck .....                                                                           | 261     |
| <i>A. ? powelli</i> , Walcott, 1883, figs. 4, 5, p. 261.....                                                | 261     |
| <i>Pulmonifera.</i>                                                                                         |         |
| <i>Physa</i> , Draparnaud .....                                                                             | 262     |
| <i>P. prisa</i> , Walcott, 1883, fig. 6, p. 262.....                                                        | 262     |
| <i>Zptychius</i> , Walcott, 1883.....                                                                       | 263     |
| <i>Z. carbonaria</i> , Walcott, 1883, fig. 7, p. 263.....                                                   | 263     |

|                                                                           | Page.   |
|---------------------------------------------------------------------------|---------|
| <i>Pteropoda.</i>                                                         |         |
| <i>Conularia</i> , Miller .....                                           | 264     |
| <i>C. missouriensis</i> , Swallow, ? 1860, pl. xxiii, fig. 4.....         | 264     |
| <i>Hyolithes</i> , Eichwald.....                                          | 264     |
| <i>H. carbonaria</i> , n. s., Walcott, 1884, pl. xxiii, fig. 3.....       | 264     |
| <i>Cephalopoda.</i>                                                       |         |
| <i>Orthoceras</i> , Breynius.....                                         | 265     |
| <i>O. randolphensis</i> , Worthen, ? 1882, pl. xviii, fig. 17 .....       | 265     |
| <i>O. eurekaensis</i> , n. s., Walcott, 1884, pl. xxiii, figs 2, 2 a..... | 265-266 |
| <i>Orthoceras</i> , sp., ? Walcott, 1884 .....                            | 266     |
| <i>Pœcilopoda.</i>                                                        |         |
| <i>Griffithides</i> , Portlock .....                                      | 266     |
| <i>G. portlocki</i> , M. & W., 1865, pl. xxiv, figs 4, 4 a, b.....        | 266-267 |
| Systematic list of fossils of each geologic formation .....               | 268-281 |
| Paleozoic section in Central Nevada.....                                  | 283-285 |

## 24.

WALCOTT, C. D.—On the Cambrian Faunas of North America; Preliminary studies.  
 <Bull. U. S. Geol. Surv. No. 10, pp. 1-74, pl. i-x. Washington, 1884.

This contains three parts. The first is a "Review of the fauna of the Saint John formation, contained in the Hartt collection." Mr. Matthew proposed the specific names for the new species excepting for one, *Harttia matthewi*, the type of the n. g. *Harttia*, Walcott. The author does not accept the genus *Conocephalites* and refers its different species to some of *Ptychoparia* and one of *Conocoryphe*. The following species are mentioned:

|                                                                                                    | Page.          |
|----------------------------------------------------------------------------------------------------|----------------|
| <i>Ecystites</i> , Billings.....                                                                   | 14, 294        |
| <i>E. primævus</i> , Billings, 1868, pl. i, fig. 2 .....                                           | 14-15, 294-295 |
| <i>Lingula</i> , Bruguière .....                                                                   | 15, 295        |
| <i>L. ? dawsoni</i> , n. s., Matthew, MSS., 1884, pl. v, fig. 8 .....                              | 15, 295        |
| <i>Acrothele</i> , Linnarson .....                                                                 | 15, 295        |
| <i>A. matthewi</i> , Hartt, sp., 1868, pl. i, figs. 4, 4 a.....                                    | 15-16, 295-296 |
| <i>Obolella</i> , Billings .....                                                                   | 16, 296        |
| <i>O. transversa</i> , Hartt, 1868, pl. i, figs. 5, 5 a .....                                      | 16, 299        |
| <i>Obolella</i> , sp., undt., Walcott, 1884 .....                                                  | 16-17, 296-297 |
| <i>Orthis</i> , Dalman.....                                                                        | 17, 297        |
| <i>O. billingsi</i> , Hartt, 1868, pl. i, figs 1, 1 b-d.....                                       | 17-18, 297-298 |
| <i>Orthis</i> , ? sp., Walcott, 1884, pl. i, fig. 1 a .....                                        | 18, 298        |
| <i>Harttia</i> , n. g., Walcott, 1884 .....                                                        | 18-19, 298-299 |
| <i>H. matthewi</i> , n. s., Walcott, 1884, pl. i, fig. 3 .....                                     | 19, 299        |
| <i>Palæacmea</i> , H. and W. ( <i>Stenotheca</i> ) .....                                           | 19, 299        |
| <i>Stenotheca acadica</i> , Hartt, sp., 1868, pl. i, fig. 6.....                                   | 19, 299        |
| <i>Hyolithes</i> , Eichwald .....                                                                  | 20, 300        |
| <i>H. acadica</i> , n. s., Hartt, sp., MSS., 1884, pl. ii, fig. 5 .....                            | 20, 300        |
| <i>H. danianus</i> , n. s., Matthew, MSS., 1884, pl. ii, figs. 7 a, b.....                         | 20-21, 300-301 |
| <i>H. micmac</i> , n. s., Matthew, MSS., 1884, pl. ii, fig. 6.....                                 | 21-22, 301-302 |
| <i>Agnostus</i> , Brongniart .....                                                                 | 22, 302        |
| <i>A. acadicus</i> , Hartt, 1868, pl. ii, figs. 2 2 a-c .....                                      | 22-23, 302-303 |
| <i>Microdiscus</i> , Emmons .....                                                                  | 23, 303        |
| <i>M. dawsoni</i> , Hartt, 1868, pl. ii, figs. 3, 3 a .....                                        | 23, 303        |
| <i>M. punctatus</i> , Salter, 1864, pl. ii, figs. 1, 1 a-c .....                                   | 24-25, 303-304 |
| <i>Paradoxides</i> , Brongniart.....                                                               | 25, 305        |
| <i>P. lamellatus</i> , Hartt, 1868, pl. iii, figs. 2, 2 a .....                                    | 25, 305        |
| <i>P. acadicus</i> , Matthew, 1882, pl. iii, figs. 3, 3 a .....                                    | 25-27, 305-307 |
| <i>P. elemnicus</i> , Matthew, 1883, pl. iii, figs. 1, 1 a-g .....                                 | 27, 307        |
| <i>Conocoryphe</i> , Corda .....                                                                   | 28, 308        |
| <i>C. (Subgenus ?), matthewi</i> , Hartt, sp., 1868, pl. iv, figs. 1, 1 a, b.....                  | 28-30, 308-310 |
| <i>C. walcotti</i> , Matthew (in lit.), 1884 .....                                                 | 30-31, 310-311 |
| <i>Bailiella</i> (now subgenus), Matthew, 1884 .....                                               | 31-32, 311-312 |
| <i>C. (Bailiella), baileyi</i> , Hartt, sp., 1868, pl. iv, figs. 3, 3 a; pl. v, figs. 7, 7 a ..... | 32-33, 312-313 |
| <i>C. elegans</i> , Hartt, sp., 1868, pl. iv, figs. 2, 2 a, b .....                                | 33-34, 313-314 |
| <i>Ptychoparia</i> , Corda .....                                                                   | 34-36, 314-316 |
| <i>P. robbi</i> , Hartt, sp., 1868, pl. vi, figs. 1, 1 a .....                                     | 36-37, 316-317 |
| <i>P. ouangondiana</i> , Hartt, sp., 1868, pl. v, figs. 4, 4 a-f.....                              | 37-38, 317-318 |



|                                                                                  | Page.          |
|----------------------------------------------------------------------------------|----------------|
| <i>P. ouangondiana</i> var. <i>aurora</i> , Hartt, sp., 1868, pl. v, fig. 5..... | 38-39, 318-319 |
| <i>P. quadrata</i> , Hartt, sp., 1868, pl. v, fig. 1 .....                       | 39, 319        |
| <i>P. orestes</i> , Hartt, sp., 1868, pl. v, figs. 3, 3 a .....                  | 39-40, 319-320 |
| <i>P. orestes</i> var. <i>thersites</i> , Hartt, sp., 1868, pl. v, fig. 2 .....  | 40-41, 320-321 |
| <i>P. tener</i> , Hartt, sp., 1868, pl. v, figs. 6, 6 a, b .....                 | 41-42, 321-322 |

The second part is on the "Fauna of the Braintree argillites." The author doubts the specific difference between *Paradoxides harlani* and *P. benetti*. He describes the following forms:

|                                                                                                  | Page.          |
|--------------------------------------------------------------------------------------------------|----------------|
| <i>Hyalithes</i> , Eichwald .....                                                                | 44, 324        |
| <i>H. shaleri</i> , n. s., Walcott, 1884, pl. vii, figs. 4, 4 a-c .....                          | 44-45, 324-325 |
| <i>Paradoxides</i> , Brongniart .....                                                            | 45, 325        |
| <i>P. harlani</i> , Green, 1834, pl. vii, fig. 3; pl. viii, figs. 1, 1 a-e; pl. ix, fig. 1 ..... | 45-47, 325-327 |
| <i>Ptychoparia</i> , Corda .....                                                                 | 47, 327        |
| <i>P. rogersi</i> , n. s., Walcott, 1884, pl. vii, fig. 2 .....                                  | 47-48, 327-328 |
| <i>Agraulos</i> , Corda .....                                                                    | 48, 328        |
| <i>A. quadrangularis</i> , Whitfield, sp., 1884, pl. vii, fig. 1 .....                           | 48-49, 328-329 |

The third part is "On a new genus and species of Phyllopoda from the middle Cambrian."

|                                                              | Page.          |
|--------------------------------------------------------------|----------------|
| <i>Protocaris</i> , n. g., Walcott, 1884 .....               | 50, 330        |
| <i>P. marshi</i> , n. s., Walcott, 1884, pl. x, fig. 1 ..... | 50-51, 350-351 |

## 25.

WALCOTT, C. D. Paleontologic Notes. < Amer. Jour. Sci., 3d ser., vol. xxix, February, pp. 114-117, pl. on p. 116. New Haven, 1885.

### OBOLIDÆ.

|                                                                        | Page |
|------------------------------------------------------------------------|------|
| <i>Linnarssonina</i> , n. g., Walcott, 1885 .....                      | 115  |
| <i>Obolella chromatica</i> , figs. 1, 2, p. 116 .....                  | 116  |
| <i>Linnarssonina transversa</i> , Hartt, sp., figs. 3, 4, p. 116 ..... | 116  |
| <i>L. sagittalis</i> , figs. 5-8, p. 116 .....                         | 116  |
| <i>L. transversa</i> , figs. 6, 7, p. 116 .....                        | 116  |

## 26.

WALCOTT, C. D. Paleozoic Notes; New Genus of Cambrian Trilobites, *Mesonacis*. < Amer. Jour. Sci., 3d ser., vol. xxix, April, pp. 328-330, figs. 2. New Haven, 1885.

|                                                                   | Page.   |
|-------------------------------------------------------------------|---------|
| <i>Mesonacis</i> , n. g., Walcott, 1885, figs. 1, 2, p. 329 ..... | 328-330 |

## 27.

WALCOTT, C. D. Note on some Paleozoic Pteropods. < Amer. Journ. Sci., 3d ser., vol. xxx, July, pp. 17-21, figs. 1-6. New Haven, 1885.

|                                                                             | Page. |
|-----------------------------------------------------------------------------|-------|
| <i>Matthevia</i> , n. g., Walcott, 1885 .....                               | 17-18 |
| <i>M. variabilis</i> , n. s., Walcott, 1885, figs. 1-6, p. 20 .....         | 18-19 |
| Note on <i>Hyalithes</i> ( <i>Camarothea</i> ) <i>emmonsii</i> , Ford ..... | 19-21 |





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## PART IV.

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### PUBLICATIONS BASED UPON THE PALEONTOLOGICAL COLLECTIONS OF THE UNITED STATES GOVERNMENT

BY

JACOB WHITMAN BAILEY,  
TIMOTHY ABBOTT CONRAD,  
JAMES DWIGHT DANA,  
CHRISTIAN GOTTFRIED EHRENBERG,  
JAMES HALL,  
ANGELO HEILPRIN,  
ALPHEUS HYATT,  
JULES MARCOU,

JOHN STRONG NEWBERRY,  
I. N. NICOLLET,  
DAVID DALE OWEN,  
HIRAM A. PROUT,  
JAMES SCHIEL,  
BENJAMIN F. SHUMARD,  
ROBERT PARR WHITFIELD.



# I.—THE WRITINGS OF JACOB WHITMAN BAILEY.

## 1.

BAILEY, J. W. [Descriptions of fossil fresh-water infusoria from Oregon.] <Rep. Expl. Exp. to the Rocky Mountains and to Oregon and North California, by J. C. Frémont. Appendix A. Geological formations by James Hall, p. 302, pl. v. Washington, 1845.

|                                                                                       | Page. |
|---------------------------------------------------------------------------------------|-------|
| <i>Eunotia librile</i> , Ehrenberg, pl. v, figs. 1, 2, 3 .....                        | 302   |
| <i>Eunotia gibba</i> , Ehr., pl. v, figs. 4, 5 .....                                  | 302   |
| <i>Pinnularia pachyptera</i> ?, Ehr., pl. v, figs. 6 .....                            | 302   |
| <i>Cocconema cymbiforme</i> ?, Ehr., pl. v, figs. 7, 8, 9 .....                       | 302   |
| <i>Gomphonema clavatum</i> ?, Ehr., pl. v, figs. 10, 11 .....                         | 302   |
| <i>Gomphonema minutissimum</i> , Ehr., pl. v, fig. 12 .....                           | 302   |
| <i>Gallionella</i> ——, n. s., J. W. Bailey, 1845, pl. v, figs. 13, 14, 15 .....       | 302   |
| <i>Gallionella distans</i> ?, J. W. Bailey, pl. v, fig. 16 .....                      | 302   |
| <i>Cocconeis preartata</i> , Ehr., pl. v, figs. 17, 18 .....                          | 302   |
| <i>Fragillaria</i> , J. W. Bailey, 1845, pl. v, fig. 19 .....                         | 302   |
| <i>Surirella</i> , J. W. Bailey, 1845, pl. v, fig. 20 .....                           | 302   |
| <i>Fragillaria rhabdosoma</i> ?, J. W. Bailey, 1845, pl. v, fig. 21 .....             | 302   |
| Spiculæ of fresh-water sponges, pl. v, figs. 22, 23 .....                             | 302   |
| ——?, pl. v, fig. 24 .....                                                             | 302   |
| Scale = 10-100ths of millimeter magnified equally with drawings, pl. v, fig. 25 ..... | 302   |

## 2.

BAILEY, J. W. Letter upon Infusorial Fossils submitted to him by Dr. Schiel. <Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean. Report of Expls. for a route for the Pacific Railroad of the line of the forty-first parallel of north latitude, by Lieut. E. G. Beckwith, 1854. Vol. ii, chap. x, pp. 111, 112, pl. iii (pars.). Washington, 1855.

|                                                                                               | Page. |
|-----------------------------------------------------------------------------------------------|-------|
| <i>Epithemia</i> , pl. iii, figs. 5, 6 .....                                                  | 111   |
| <i>Cocconema asperum</i> , Ehr .....                                                          | 111   |
| <i>Cocconema cymbiforme</i> , Ehr .....                                                       | 111   |
| <i>Discoplea atmospherica</i> , Ehr .....                                                     | 111   |
| <i>Surirella campylodiscus</i> ?, Ehr., pl. iii, fig. 4 .....                                 | 111   |
| <i>Cocconeis</i> , pl. iii, fig. 3 .....                                                      | 111   |
| <i>Cymbella gibba</i> , n. s., Bailey, 1855, pl. iii, fig. 1 .....                            | 111   |
| <i>Cymatopleura</i> ? <i>campylodiscus</i> , n. s., Bailey, 1855, pl. iii, figs. 2 a, b ..... | 111   |
| <i>Galleinella</i> , pl. iii, figs. 7 a, b .....                                              | 112   |
| <i>Galleinella varians</i> .....                                                              | 112   |
| <i>Stephanodiscus</i> ——? .....                                                               | 112   |
| <i>Pennularia nobilis</i> , Ehr .....                                                         | 112   |
| <i>Pennularia viridis</i> .....                                                               | 112   |
| <i>Epithemia</i> .....                                                                        | 112   |
| <i>Surirella splendida</i> (? Ehr.) .....                                                     | 112   |
| Pollen of pine .....                                                                          | 112   |
| <i>Spongiolites</i> .....                                                                     | 112   |





## II.—THE WRITINGS OF TIMOTHY ABBOTT CONRAD.

### 1.

CONRAD, T. A. Observations on a portion of the Atlantic Tertiary region, with a description of New Species of organic remains. <2d Bull. Proc. Natl. Institution, pp. 171-194, pls. i and ii. Washington, 1842.

|                                                                  | Page.   |
|------------------------------------------------------------------|---------|
| Section of the cliff at Claiborne.....                           | 174     |
| Classification of Tertiary formations.....                       | 176     |
| Table of Atlantic supracretaceous deposits.....                  | 177     |
| Geographical range of Lower Tertiary.....                        | 178     |
| Geographical range of Medial Tertiary.....                       | 179     |
| Localities of the Upper Tertiary.....                            | 176     |
| Medial Tertiary period.....                                      | 180     |
| Section at Fair Haven.....                                       | 181     |
| List of species obtained.....                                    | 181-182 |
| (Section) Cliff near Beckett's.....                              | 182     |
| (List of fossils).....                                           | 185     |
| (Section) Saint Mary's River.....                                | 185     |
| Organic remains found on Saint Mary's River.....                 | 186-187 |
| Post-Pliocene period.....                                        | 187     |
| Upper Tertiary formation.....                                    | 187     |
| (Sections near Patuxent River).....                              | 188     |
| Section near the mouth of Potomac.....                           | 189     |
| (List of species).....                                           | 190     |
| List of Fossil shells at Benner's.....                           | 191-192 |
| Descriptions of new Tertiary fossils.....                        | 192     |
| Lower Tertiary or Eocene fossils.....                            | 192     |
| <i>Ostrea</i> , Linnaeus.....                                    | 192     |
| <i>O. sellaeformis</i> , n. s., Conrad, 1842, pl. i, fig. 1..... | 192-193 |
| <i>Pholadomya</i> .....                                          | 193     |
| <i>P. marylandica</i> , n. s., Conrad, 1842, pl. i, fig. 3.....  | 193     |
| <i>Pholas</i> .....                                              | 193     |
| <i>P. petrosa</i> , n. s., Conrad, 1842, pl. ii, fig. 4.....     | 193     |
| <i>Isocardia</i> , Lamarck.....                                  | 193     |
| <i>I. markovi</i> , n. s., Conrad, 1842, pl. ii, fig. 1.....     | 193     |
| <i>Pecten</i> , Lamarck.....                                     | 194     |
| <i>P. humphreysii</i> , n. s., Conrad, 1842, pl. ii, fig. 2..... | 194     |
| <i>Dispotæa</i> , Say.....                                       | 194     |
| <i>D. constricta</i> , n. s., Conrad, 1842, pl. i, fig. 2.....   | 194     |
| <i>Scalaria</i> , Lamarck.....                                   | 194     |
| <i>S. expansa</i> , n. s., Conrad, 1842, pl. ii, fig. 3.....     | 194     |
| <i>Buccinum</i> , Lamarck.....                                   | 194     |
| <i>B. integrum</i> , n. s., Conrad, 1842, pl. ii, fig. 5.....    | 194     |
| <i>Scutella</i> , Lamarck.....                                   | 194     |
| <i>S. aberti</i> , n. s., Conrad, 1842.....                      | 194     |

### 2.

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|                                                                               | Page. |
|-------------------------------------------------------------------------------|-------|
| <i>Mya abrupta</i> , n. s., Conrad, 1849, pl. xvii, figs. 5, 5 a.....         | 723   |
| <i>Thracia trapezoides</i> , n. s., Conrad, 1849, pl. xvii, figs. 6 a, b..... | 723   |
| <i>Solemya ventricosa</i> , n. s., Conrad, 1849, pl. xvii, figs. 7, 8.....    | 723   |

|                                                                                              | Page.   |
|----------------------------------------------------------------------------------------------|---------|
| <i>Donax? protezta</i> , n. s., Conrad, 1849, pl. xvii, fig. 9.....                          | 723-724 |
| <i>Venus bisecta</i> , n. s., Conrad, 1849, pl. xvii, figs. 10, 10 a.....                    | 724     |
| <i>Venus angustifrons</i> , n. s., Conrad, 1849, pl. xvii, fig. 11.....                      | 724     |
| <i>Venus lamellifera</i> , n. s., Conrad, 1849, pl. xvii, figs. 12, 12 a.....                | 724     |
| <i>Venus brevitineata</i> , n. s., Conrad, 1849, pl. xvii, fig. 13.....                      | 724     |
| <i>Venus</i> ———, sp., Conrad, 1849, pl. xviii, figs. 1, 1 a.....                            | 724     |
| <i>Lucina acutilineata</i> , n. s., Conrad, 1849, pl. xviii, figs. 2, 2 a, b.....            | 725     |
| <i>Tellina arcata</i> , n. s., Conrad, 1849, pl. xviii, figs. 3, 3 a.....                    | 725     |
| <i>Tellina emacerata</i> , n. s., Conrad, 1849, pl. xviii, fig. 4.....                       | 725     |
| <i>Tellina albaria</i> , n. s., Conrad, 1849, pl. xviii, fig. 5.....                         | 725     |
| <i>Tellina nasuta</i> , n. s., Conrad, 1849.....                                             | 725     |
| <i>Tellina bitruncata</i> , n. s., Conrad, 1849.....                                         | 725     |
| <i>Nucula divaricata</i> , n. s., Conrad, 1849, pl. xviii, figs. 6, 6 a.....                 | 725-726 |
| <i>Nucula impressa</i> , n. s., Conrad, 1849, pl. xviii, figs. 7 a-e.....                    | 726     |
| <i>Pectunculus patulus</i> , n. s., Conrad, 1849, pl. xviii, figs. 8, 8 a.....               | 726     |
| <i>Pectunculus nitens</i> , n. s., Conrad, 1849, pl. xviii, figs. 9 a, b.....                | 726     |
| <i>Arca devincta</i> , n. s., Conrad, 1849, pl. xviii, figs. 10 a.....                       | 726     |
| <i>Arca</i> ———, Conrad, 1849, pl. xviii, figs. 11 a, b.....                                 | 726     |
| <i>Cardita subtenta</i> , n. s., Conrad, 1849, pl. xviii, figs. 12, 12 a.....                | 726     |
| <i>Pecten propatulus</i> , n. s., Conrad, 1849, pl. xviii, figs. 13, 13 a.....               | 726     |
| <i>Terebratula nitens</i> , n. s., Conrad, 1849, pl. xix, figs. 1, 1 a.....                  | 726-727 |
| ———? Conrad, 1849, pl. xix, fig. 2.....                                                      | 727     |
| <i>Dolium petrosum</i> , n. s., Conrad, 1849, pl. xix, figs. 3 a, b, 4 a, b, and 5 a, b..... | 727     |
| <i>Sigaretus scopulosus</i> , n. s., Conrad, 1849, pl. xix, figs. 6, 6 a-d.....              | 727     |
| <i>Natica sazea</i> , n. s., Conrad, 1849, pl. xix, figs. 7 a, b.....                        | 727     |
| <i>Bulla petrosa</i> , n. s., Conrad, 1849, pl. xix, fig. 8.....                             | 727     |
| <i>Crepidula praeupta</i> , n. s., Conrad, 1849, pl. xix, figs. 9 a, and 10 a, b.....        | 727     |
| <i>Crepidula</i> ———? Conrad, 1849, pl. xix, figs. 11 a, b.....                              | 727     |
| <i>Rostellaria indurata</i> , n. s., Conrad, 1849, pl. xix, fig. 12.....                     | 727-728 |
| <i>Cerithium mediale</i> , n. s., Conrad, 1849, pl. xx, figs. 1 a.....                       | 728     |
| <i>Buccinum? devinctum</i> , n. s., Conrad, 1849, pl. xx, figs. 2, 2 a.....                  | 728     |
| <i>Fusus geniculus</i> , n. s., Conrad, 1849, pl. xx, fig. 3.....                            | 728     |
| <i>Fusus corpulentus</i> , n. s., Conrad, 1849, pl. xx, fig. 4.....                          | 728     |
| <i>Nautilus angustatus</i> , n. s., Conrad, 1849, pl. xx, figs. 5, 6.....                    | 728     |
| <i>Teredo substriata</i> , pl. xx, figs. 7 a, b.....                                         | 728     |

The figures from 8 to 13, inclusive, on pl. xx, representing species from Astoria, are given of natural size, without names.

The plates were destroyed by fire, but about a dozen photographic copies of them have been taken by the U. S. Geological Survey.

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The plates are numbered in a very irregular manner.

#### Echinodermata.

|                                                                                      | Page. |
|--------------------------------------------------------------------------------------|-------|
| <i>Echinus</i> , Lin., Lam.....                                                      | 212   |
| <i>E. syriacus</i> , n. s., Conrad, 1852, pl. i, fig. 1, and pl. xxii, fig. 127..... | 212   |
| <i>Holaster</i> , Agassiz.....                                                       | 212   |
| <i>H. syriacus</i> , n. s., Conrad, 1852, pl. i, fig. 2.....                         | 212   |
| <i>Cidaris</i> , Lam.....                                                            | 212   |
| Spines of <i>Cidaris</i> , Conrad, 1852, pl. i, figs. 3-5.....                       | 212   |

#### Testacea.

##### Bivalves.

|                                                                                    | Page. |
|------------------------------------------------------------------------------------|-------|
| <i>Ostrea</i> , Lin., Lam.....                                                     | 212   |
| <i>O. virgata</i> , Goldfuss, Nyst., pl. i, figs. 6-8.....                         | 212   |
| <i>O. syriaca</i> , n. s., Conrad, 1852, pl. ii, fig. 12.....                      | 212   |
| <i>O. linguloides</i> , n. s., Conrad, 1852, pl. ii, fig. 13.....                  | 212   |
| <i>O. scapha</i> , Römer, pl. xv, figs. 78, 79.....                                | 213   |
| <i>Exogyra</i> , Say.....                                                          | 213   |
| <i>Ostrea boussingaultii</i> , d'Orbigny.....                                      | 213   |
| <i>E. boussingaultii</i> , d'Orbigny, pl. i, fig. 9, and pl. ii, figs. 10, 11..... | 213   |

|                                                                                                                              | Page.   |
|------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Pecten</i> , Gault., Lam.....                                                                                             | 213     |
| <i>Pecten</i> , ———, Conrad, 1852.....                                                                                       | 213     |
| <i>Nucula</i> , Lam.....                                                                                                     | 213     |
| <i>N. submucronata</i> , n. s., Conrad, 1852, pl. ii, fig. 14.....                                                           | 213     |
| <i>N. parallela</i> , n. s., Conrad, 1852, pl. ii, fig. 15.....                                                              | 214     |
| <i>N. syriaca</i> , n. s., Conrad, 1852, pl. iii, fig. 16.....                                                               | 214     |
| <i>N. myiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 17.....                                                             | 214     |
| <i>N. perobliqua</i> , n. s., Conrad, pl. iii, fig. 18.....                                                                  | 214     |
| <i>Trigonia</i> , Brug.....                                                                                                  | 214     |
| <i>T. syriaca</i> , n. s., Conrad, 1852, pl. iii, figs. 19-23.....                                                           | 214     |
| <i>T. alta</i> , n. s., Conrad, 1852, pl. iv, fig. 24.....                                                                   | 214     |
| <i>T. cuneiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 22.....                                                           | 214-215 |
| <i>Isocardia</i> , Lam.....                                                                                                  | 215     |
| <i>I. crenulata</i> , n. s., Conrad, 1852, pl. iv, fig. 26.....                                                              | 215     |
| <i>Astarte</i> , Sow.....                                                                                                    | 215     |
| <i>A. syriaca</i> , n. s., Conrad, 1852, pl. iv, fig. 25.....                                                                | 215     |
| <i>A. orientalis</i> , n. s., Conrad, 1852, pl. iv, fig. 27.....                                                             | 215     |
| <i>A. pervetus</i> , n. s., Conrad, 1852, pl. iv, fig. 28.....                                                               | 215     |
| <i>A. engonata</i> , n. s., Conrad, 1852, pl. iv, fig. 29.....                                                               | 215     |
| <i>A. arcata</i> , n. s., Conrad, 1852, pl. xx, fig. 119.....                                                                | 215     |
| <i>Arca</i> , Lin.....                                                                                                       | 215     |
| <i>A. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 30.....                                                                 | 215     |
| <i>A. brevifrons</i> , n. s., Conrad, 1852, pl. v, fig. 31.....                                                              | 215     |
| <i>A. indurata</i> , n. s., Conrad, 1852, pl. v, fig. 33.....                                                                | 216     |
| <i>A. orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 36.....                                                              | 216     |
| <i>A. declivis</i> , n. s., Conrad, 1852, pl. v, fig. 32.....                                                                | 216     |
| <i>A. subrotunda</i> , n. s., Conrad, 1852, pl. v, fig. 34.....                                                              | 216     |
| <i>A. acclivis</i> , n. s., Conrad, 1852, pl. v, fig. 35.....                                                                | 216     |
| <i>Corbula</i> , Brug.....                                                                                                   | 216     |
| <i>C. congesta</i> , n. s., Conrad, 1852, pl. v, fig. 37, and pl. xxii, fig. 130.....                                        | 216     |
| <i>Cardium</i> , Lin., Lam.....                                                                                              | 219     |
| <i>C. biserialatum</i> , n. s., Conrad, 1852, pl. vi, figs. 38-40.....                                                       | 216-217 |
| <i>C. crebriechinatum</i> , n. s., Conrad, 1852, pl. vi, figs. 41-43, and pl. xv, fig. 77; Appendix,<br>pl. ii, fig. 16..... | 217     |
| <i>C. syriacum</i> , n. s., Conrad, 1852, pl. vii, fig. 45.....                                                              | 217     |
| <i>C. hermonense</i> , n. s., Conrad, 1852, pl. xxii, fig. 129.....                                                          | 217     |
| <i>Ordium</i> ? Conrad, 1852, pl. xv, fig. 76.....                                                                           | 217     |
| <i>Pholadomya</i> , Sow.....                                                                                                 | 217     |
| <i>P. decisa</i> , n. s., Conrad, 1852, pl. vii, fig. 44.....                                                                | 217     |
| <i>Panopæa</i> , Ménard.....                                                                                                 | 217     |
| <i>P. pectorosa</i> , n. s., Conrad, 1852, pl. vii, fig. 46.....                                                             | 217     |
| <i>Inoceramus</i> , Sow.....                                                                                                 | 218     |
| <i>I. lynchi</i> , n. s., Conrad, 1852, pl. viii, fig. 47.....                                                               | 218     |
| <i>Mactra</i> , Lin., Lam.....                                                                                               | 218     |
| <i>M. petrosa</i> , n. s., Conrad, 1852, pl. viii, fig. 48.....                                                              | 218     |
| <i>M. pervetus</i> , n. s., Conrad, 1852, pl. viii, fig. 49.....                                                             | 218     |
| <i>M. arciformis</i> , n. s., Conrad, 1852, pl. viii, fig. 50.....                                                           | 218     |
| <i>M. syriaca</i> , n. s., Conrad, pl. viii, fig. 51.....                                                                    | 218     |
| <i>Venus</i> , Lin., Lam.....                                                                                                | 218     |
| <i>V. syriaca</i> , n. s., Conrad, 1852, pl. ix, fig. 52.....                                                                | 218     |
| <i>V. indurata</i> , n. s., Conrad, 1852, pl. ix, fig. 53.....                                                               | 219     |
| <i>Cytherea</i> , Lam.....                                                                                                   | 219     |
| <i>C. syriaca</i> , n. s., Conrad, 1852, pl. ix, figs. 54-56.....                                                            | 219     |
| <i>Lucina</i> , Lam.....                                                                                                     | 219     |
| <i>L. syriaca</i> , n. s., Conrad, 1852, pl. x, fig. 57.....                                                                 | 219     |
| <i>L. ? subtruncata</i> , n. s., Conrad, 1852, pl. xv, fig. 76.....                                                          | 219     |
| <i>Tellina</i> , Lin., Lam.....                                                                                              | 219     |
| <i>T. syriaca</i> , n. s., Conrad, 1852, pl. x, figs. 59-61.....                                                             | 219     |
| <i>T. obruta</i> , n. s., Conrad, 1852, pl. x, fig. 58.....                                                                  | 219     |
| <i>Orbicula</i> ? Lam.....                                                                                                   | 219     |
| <i>O. subobliqua</i> , n. s., Conrad, 1852, pl. x, fig. 61½.....                                                             | 219     |
| Univalves:                                                                                                                   |         |
| <i>Chenopus</i> , Phill.....                                                                                                 | 220     |
| <i>C. turriculoides</i> , n. s., Conrad, 1852, pl. x, fig. 62.....                                                           | 220     |
| <i>C. induratus</i> , n. s., Conrad, 1852, pl. xi, fig. 69.....                                                              | 220     |



|                                                                                  | Page.   |
|----------------------------------------------------------------------------------|---------|
| <i>O. syriacus</i> , n. s., Conrad, pl. xii, fig. 71 .....                       | 220     |
| <i>Natica</i> , Lam .....                                                        | 220     |
| <i>N. indurata</i> , n. s., Conrad, 1852, pl. xi, figs. 65 and 68 .....          | 220     |
| <i>N. syriaca</i> , n. s., Conrad, 1852, pl. xii, fig. 70 .....                  | 220     |
| <i>Phorus</i> , Montf. ....                                                      | 220     |
| <i>P. syriacus</i> , n. s., Conrad, 1852, pl. xi, fig. 66 .....                  | 220     |
| <i>Turritella</i> , Lam .....                                                    | 220     |
| <i>T. syriaca</i> , n. s., Conrad, 1852, pl. xv, fig. 75 .....                   | 220-221 |
| <i>T. magnicostata</i> , n. s., Conrad, 1852, pl. x, fig. 63-64 .....            | 221     |
| <i>T. peralveata</i> , n. s., Conrad, 1852, pl. xx, fig. 120 .....               | 221     |
| <i>Nerinea</i> , DeFr. ....                                                      | 221     |
| <i>N. syriaca</i> , n. s., Conrad, 1852, pl. xii, fig. 72; pl. xi, fig. 67 ..... | 221     |
| <i>N. rhamdunensis</i> , n. s., Conrad, 1852, pl. xxii, fig. 132 .....           | 221     |
| <i>Strombus</i> , Lin., Lam. ....                                                | 221     |
| <i>S. pervetus</i> , n. s., Conrad, 1852, pl. xiii, fig. 73 .....                | 221     |
| <i>Ammonites</i> .....                                                           | 221     |
| <i>A. syriacus</i> , n. s., Conrad, 1852, pl. xiv, fig. 74 .....                 | 221     |

## ORGANIC REMAINS OF THE CHALK.

|                                                                                                       |         |
|-------------------------------------------------------------------------------------------------------|---------|
| <i>Astarte</i> , Sow .....                                                                            | 222     |
| <i>A. undulosa</i> , n. s., Conrad, 1852, pl. xvi, figs. 81, and 86; pl. xvii, figs. 89, 90, 99. .... | 222     |
| <i>A. mucronata</i> , n. s., Conrad, pl. xvii, fig. 88 .....                                          | 222     |
| <i>Corbula</i> , Lam. ....                                                                            | 222     |
| <i>C. sublineolata</i> , n. s., Conrad, 1852, pl. xvi, fig. 83 .....                                  | 222     |
| <i>C. syriaca</i> , n. s., Conrad, 1852, pl. xxi, fig. 125 .....                                      | 222     |
| <i>Opis</i> , DeFr. ....                                                                              | 222     |
| <i>O. undatus</i> , n. s., Conrad, 1852, pl. xvii, fig. 87 .....                                      | 222     |
| <i>Nucula</i> , Lam. ....                                                                             | 222     |
| <i>N. perovata</i> , n. s., Conrad, 1852, pl. xvii, fig. 91 .....                                     | 222     |
| <i>N. crebrilineata</i> , n. s., Conrad, 1852, pl. xvii, fig. 92-93 .....                             | 223     |
| <i>N. ———</i> , Conrad, 1852, Appendix, pl. i, fig. 5 .....                                           | 223     |
| <i>N. perdita</i> , n. s., Conrad, 1852, pl. xvii, fig. 96 .....                                      | 223     |
| <i>N. ———</i> , Conrad, 1852, pl. xix, fig. 111 .....                                                 | 223     |
| <i>Cucullæa</i> , Lam. ....                                                                           | 223     |
| <i>C. subrotunda</i> , n. s., Conrad, 1852, pl. xvii, fig. 94 .....                                   | 223     |
| <i>C. linteæ</i> , n. s., Conrad, 1852, pl. xvii, fig. 95 .....                                       | 223     |
| <i>C. parallela</i> , n. s., Conrad, 1852, pl. xvii, fig. 98 .....                                    | 223     |
| <i>Arca</i> , Lin. ....                                                                               | 223     |
| <i>A. fabiformis</i> , n. s., Conrad, 1852, pl. xvii, fig. 97 .....                                   | 223     |
| <i>Crassatella</i> , Lam. ....                                                                        | 223     |
| <i>C. syriaca</i> , n. s., Conrad, 1852, pl. xvii, fig. 100 .....                                     | 223-224 |
| <i>Lithodomus</i> , Cuv. ....                                                                         | 224     |
| <i>L. cretaceus</i> , n. s., Conrad, 1852, pl. xvii, fig. 101 .....                                   | 224     |
| <i>Gryphæa</i> , Lam. ....                                                                            | 224     |
| <i>G. capuloides</i> , n. s., Conrad, 1852, pl. xviii, figs. 103 and 104 .....                        | 224     |
| <i>G. vesicularis</i> , Brown, pl. xviii, fig. 105 .....                                              | 224     |
| <i>Exogyra</i> , Say .....                                                                            | 224     |
| <i>E. densata</i> , n. s., Conrad, pl. xviii, fig. 102 .....                                          | 224     |
| <i>E. densata</i> , var., Conrad, 1852, pl. xviii, fig. 106 .....                                     | 224     |
| <i>Avicula</i> , Lam. ....                                                                            | 225     |
| <i>A. samariensis</i> , n. s., Conrad, 1852, pl. xix, fig. 107 .....                                  | 225     |
| <i>Pecten</i> , Lin., Lam. ....                                                                       | 225     |
| <i>P. delumbis</i> , n. s., Conrad, 1852, pl. xix, fig. 110, and Appendix, pl. i, fig. 4 .....        | 225     |
| <i>P. obrutus</i> , n. s., Conrad, 1852, pl. xix, fig. 114 .....                                      | 225     |
| <i>Cardium</i> , Lin., Lam. ....                                                                      | 225     |
| <i>C. bellum</i> , n. s., Conrad, 1852, Appendix, pl. i, fig. 3 .....                                 | 225     |
| <i>C. ovulum</i> , n. s., Conrad, 1852, pl. xix, fig. 108 .....                                       | 225     |
| <i>Astarte</i> , Sow .....                                                                            | 225     |
| <i>A. linteæ</i> , n. s., Conrad, 1852, pl. xix, fig. 109 .....                                       | 225     |
| <i>A. sublineolata</i> , n. s., Conrad, pl. xix, fig. 112 .....                                       | 225     |
| <i>Venus</i> , Lin., Lam. ....                                                                        | 225     |
| <i>V. perovalis</i> , n. s., Conrad, Appendix, pl. i, fig. 2 .....                                    | 225     |
| <i>Inoceramus</i> , Sow .....                                                                         | 226     |
| <i>I. aratus</i> , n. s., Conrad, 1852, pl. xix, fig. 113 .....                                       | 226     |
| <i>Lucina</i> , Lam. ....                                                                             | 226     |

|                                                                         | Page. |
|-------------------------------------------------------------------------|-------|
| <i>L. safedensis</i> , n. s., Conrad, 1852, pl. ix, fig. 115.....       | 226   |
| <i>Terebratulula</i> , Lam. ....                                        | 226   |
| <i>T. hermonensis</i> , n. s., Conrad, 1852, pl. xx, fig. 123 .....     | 226   |
| Univalves:                                                              |       |
| <i>Fusus</i> , Lam. ....                                                | 226   |
| <i>F. ellerii</i> , n. s., Conrad, 1852, pl. xvi, fig. 82.....          | 226   |
| <i>Chenopus</i> , Phillipi .....                                        | 226   |
| <i>Chenopus</i> , Conrad, 1852 .....                                    | 226   |
| <i>Hippurites</i> , Lam. ....                                           | 226   |
| <i>H. syriacus</i> , n. s., Conrad, 1852, pl. xvi, fig. 84 .....        | 226   |
| <i>Nerinea</i> , DeFr. ....                                             | 227   |
| <i>N. cretacea</i> , n. s., Conrad, 1852, pl. xvi, fig. 85 .....        | 227   |
| <i>Ancylloceras</i> , d'Orbigny .....                                   | 227   |
| <i>A. safedensis</i> , n. s., Conrad, 1852, pl. xx, figs. 117-118.....  | 227   |
| <i>Baculites</i> , Lam. ....                                            | 227   |
| <i>B. syriacus</i> , n. s., Conrad, 1852, pl. xx, fig. 121 .....        | 227   |
| <i>B</i> ———, Conrad, 1852, pl. xx, fig. 122 .....                      | 227   |
| <i>Ammonites</i> , Brug. ....                                           | 227   |
| <i>A. safedensis</i> , n. s., Conrad, 1852, pl. xxi, fig. 124.....      | 227   |
| <i>Nummulites</i> .....                                                 | 227   |
| <i>N. arbiensis</i> , n. s., Conrad, 1852, pl. xxii, fig. 127 .....     | 227   |
| <i>Dentalium</i> , Lin. ....                                            | 228   |
| <i>D. cretaceum</i> , n. s., Conrad, 1852, Appendix, pl. i, fig. 1..... | 228   |
| Echinodermata .....                                                     | 228   |
| <i>Echinus</i> , Lin. ....                                              | 228   |
| <i>E. kerakensis</i> , n. s., Conrad, 1852, pl. xix, fig. 116 .....     | 228   |

APPENDIX.

JURASSIC FORMS,

Bivalves:

|                                                                                   |     |
|-----------------------------------------------------------------------------------|-----|
| <i>Janira</i> , Shum.....                                                         | 230 |
| <i>J. syriaca</i> , n. s., Conrad, 1852, pl. i, fig. 6 .....                      | 230 |
| <i>Ostraea</i> , Lin., Lam. ....                                                  | 230 |
| <i>O. corticosa</i> , n. s., Conrad, 1852, pl. i, fig. 7.....                     | 230 |
| <i>O. virgata</i> ? n. s., Conrad, pl. i, fig. 8.....                             | 230 |
| <i>Opis</i> , DeFr. ....                                                          | 231 |
| <i>O. equalis</i> , n. s., Conrad, 1852, pl. ii, fig. 9.....                      | 231 |
| <i>O. orientalis</i> , n. s., Conrad, 1852, pl. ii, fig. 10 .....                 | 231 |
| <i>O. obrutus</i> , n. s., Conrad, 1852, pl. ii, fig. 12.....                     | 231 |
| <i>Astarte</i> , Sow. ....                                                        | 231 |
| <i>A. lucinoides</i> , n. s., Conrad, 1852, pl. ii, fig. 11 .....                 | 231 |
| <i>A. subcordata</i> , n. s., Conrad, 1852, pl. ii, fig. 13.....                  | 231 |
| <i>Inoceramus</i> , Sow. ....                                                     | 231 |
| <i>I. syriacus</i> , n. s., Conrad, 1852, pl. ii, fig. 14 .....                   | 231 |
| <i>I. elevatus</i> , n. s., Conrad, 1852, pl. ii, fig. 15 .....                   | 231 |
| <i>Pholadomya</i> , Sow. ....                                                     | 231 |
| <i>P. syriaca</i> , n. s., Conrad, 1852, pl. ii, fig. 17.....                     | 231 |
| <i>Cardium</i> , Lin. ....                                                        | 231 |
| <i>C. crebricchinatum</i> , n. s., Conrad, 1852, pl. ii, fig. 16 .....            | 231 |
| <i>Arca</i> , Lin. ....                                                           | 231 |
| <i>A. longa</i> , n. s., Conrad, 1852, pl. iii, fig. 18.....                      | 231 |
| <i>A. bhamdunensis</i> , n. s., Conrad, 1852, pl. iii, fig. 19 .....              | 232 |
| <i>A. cuneus</i> , n. s., Conrad, 1852, pl. iii, fig. 22 .....                    | 232 |
| <i>Cuculltea</i> , Lam. ....                                                      | 232 |
| <i>C. opiformis</i> , n. s., Conrad, 1852, pl. iii, fig. 21 .....                 | 232 |
| <i>Nucula</i> , Lam. ....                                                         | 232 |
| <i>N. abrupta</i> , n. s., Conrad, 1852, pl. iii, fig. 20.....                    | 232 |
| <i>N. ? obtenta</i> , n. s., Conrad, 1852, pl. iii, fig. 23 .....                 | 232 |
| <i>Tellina</i> , Lin. ....                                                        | 232 |
| <i>T. syriaca</i> ?, Conrad, 1852, pl. iii, fig. 25, and pl. x, figs. 59-61 ..... | 232 |
| <i>Orbicula</i> , Cuv .....                                                       | 232 |
| <i>O. ? syriaca</i> , n. s., Conrad, 1852, pl. iii, fig. 24 .....                 | 232 |
| <i>Trigonia</i> , Brug. ....                                                      | 232 |
| <i>T. syriaca</i> , n. s., Conrad, 1852, pl. iv, fig. 26 .....                    | 232 |

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>T. distans</i> , n. s., Conrad, 1852, pl. iv, fig. 27 .....                 | 232     |
| <i>Panopaea</i> , Mén. ....                                                    | 232     |
| <i>P. orientalis</i> , n. s., Conrad, 1852, pl. iv, fig. 28. ....              | 232-233 |
| Univalves:                                                                     |         |
| <i>Nerinea</i> , DeFrance .....                                                | 233     |
| <i>N. ? cochleiformis</i> , n. s., Conrad, 1852, pl. iv, fig. 29 .....         | 233     |
| <i>N. —</i> , Conrad, 1852, pl. iv, figs. 30, 31 .....                         | 233     |
| <i>N. ? orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 32 .....             | 233     |
| <i>N. syriaca</i> , n. s., Conrad, 1852, pl. v, figs. 33, 34, 35, 37, 38 ..... | 233     |
| <i>N. abbreviata</i> , n. s., Conrad, 1862, pl. v, fig. 36 .....               | 233     |
| <i>N. —</i> , Conrad, 1852. ....                                               | 233     |
| <i>Actæonella</i> , d'Orb. ....                                                | 233     |
| <i>A. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 40 .....                  | 233     |
| <i>Cerithium</i> , Adams, Lam. ....                                            | 233     |
| <i>C. bilineatum</i> , n. s., Conrad, 1852, pl. v, fig. 39 .....               | 233     |
| <i>Natica</i> , Lam. ....                                                      | 233     |
| <i>N. orientalis</i> , n. s., Conrad, 1852, pl. v, fig. 41 .....               | 233     |
| <i>Turritella</i> , Lam. ....                                                  | 234     |
| <i>T. syriaca</i> , n. s., Conrad, 1852, pl. v, fig. 42 .....                  | 234     |
| <i>Cancellaria</i> , Lam. ....                                                 | 234     |
| <i>C. petrosa</i> , n. s., Conrad, 1852, pl. v, fig. 43 .....                  | 234     |
| Bivalves:                                                                      |         |
| <i>Lithodomus</i> , Cuv. ....                                                  | 234     |
| <i>L. stamineus</i> , n. s., Conrad, 1852, pl. v, fig. 44 .....                | 234     |
| <i>Cardium</i> , Lin. ....                                                     | 234     |
| <i>C. biseriatum</i> , n. s., Conrad, 1852, pl. v, fig. 45 .....               | 234     |
| Univalves:                                                                     |         |
| <i>Ammonites</i> .....                                                         | 234     |
| <i>A. libanensis</i> , n. s., Conrad, 1852, pl. vi, fig. 46 .....              | 234     |
| <i>Hippurites</i> , Lam. ....                                                  | 234     |
| <i>H. tiratus</i> , n. s., Conrad, 1852, pl. vii, figs. 47, 48 .....           | 234     |
| <i>H. plicatus</i> , n. s., Conrad, 1852, pl. vii, fig. 49 .....               | 234     |
| <i>Natica</i> , Lam. ....                                                      | 234     |
| <i>N. ? scalaris</i> , n. s., Conrad, 1852, pl. vii, fig. 50 .....             | 234     |
| <i>Chenopus</i> .....                                                          | 235     |
| <i>C. —</i> , Conrad, pl. viii, figs. 51, 52 .....                             | 235     |
| Bivalves:                                                                      |         |
| <i>Corbula</i> , Lam. ....                                                     | 235     |
| <i>C. aleihensis</i> , n. s., Conrad, 1852, pl. viii, fig. 53 .....            | 235     |
| <i>Orbicula</i> , Lam. ....                                                    | 235     |
| <i>Orbicula ? —</i> , Conrad, 1852, pl. viii, fig. 55 .....                    | 235     |
| <i>Echinodermata</i> .....                                                     | 235     |
| <i>Echinus</i> , Lin. ....                                                     | 235     |
| <i>E. libanensis</i> , n. s., Conrad, 1852, pl. viii, fig. 54 .....            | 235     |
| <i>E. bullatus</i> , n. s., Conrad, 1852, pl. viii, fig. 56 .....              | 235     |

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CONRAD, T. A. Report on the fossil shells collected in California by William P. Blake, geologist of the expedition under the command of Lieut. R. S. Williamson, United States Topographical Engineers. <Reports of Explorations and Surveys from the Mississippi River to the Pacific Ocean. Appendix to the Preliminary Geological Report of William P. Blake. Paleontology article I, pp. 5-20, 8vo, House Document 129, Washington (1855).

## CATALOGUE.

|                                     | Page. |
|-------------------------------------|-------|
| Eocene .....                        | 7     |
| Miocene and recent formations ..... | 7-8   |

## DESCRIPTIONS OF FOSSIL SHELLS FROM THE EOCENE AND MIOCENE FORMATIONS OF CALIFORNIA.

| Eocene.                                                     |   |
|-------------------------------------------------------------|---|
| <i>Cardium</i> , Lin. ....                                  | 9 |
| <i>C. luteum</i> , n. s., Conrad, 1855, pl. I, fig. 1 ..... | 9 |

|                                                                     | Page. |
|---------------------------------------------------------------------|-------|
| <i>Dosinia</i> , Scopoli .....                                      | 9     |
| <i>D. alta</i> , n. s., Conrad, 1855, pl. i, fig. 2 .....           | 9     |
| <i>Meretrix</i> , Lam.— <i>Cytherea</i> , Lam. ....                 | 9     |
| <i>M. wasana</i> , n. s., Conrad, 1855, pl. i, fig. 3 .....         | 9     |
| <i>M. californiana</i> , n. s., Conrad, 1855, pl. i, fig. 4 .....   | 9     |
| <i>Crassatella</i> , Lam. ....                                      | 9     |
| <i>C. wasana</i> , n. s., Conrad, 1855, pl. i, fig. 5 .....         | 9     |
| <i>C. alta</i> , n. s., Conrad, 1855 .....                          | 9     |
| <i>Mytilus</i> , Lin. ....                                          | 10    |
| <i>M. humerus</i> , n. s., Conrad, 1855, pl. i, fig. 10 .....       | 10    |
| <i>Cardita</i> , Brug. ....                                         | 10    |
| <i>C. planicosta</i> , n. s., Conrad, pl. i, fig. 6 .....           | 10    |
| <i>Natica</i> , Adanson .....                                       | 10    |
| <i>N. ætites</i> ?, Conrad, 1833, pl. i, fig. 7 .....               | 10    |
| <i>N. gibbosa</i> and <i>semilunata</i> , Lea .....                 | 10    |
| <i>N. alveata</i> , n. s., Conrad, 1855, pl. i, figs. 8, 8 a .....  | 10    |
| <i>Turritella</i> , Lam. ....                                       | 10    |
| <i>T. wasana</i> , n. s., Conrad, 1855, pl. i, fig. 12 .....        | 10-11 |
| <i>Voluta</i> [ <i>lithes</i> , Swains. [c] ] .....                 | 11    |
| <i>V. californiana</i> , n. s., Conrad, 1855, pl. i, fig. 9 .....   | 11    |
| <i>Busycon</i> , ? .....                                            | 11    |
| <i>B. ? blakei</i> , n. s., Conrad, 1855, pl. i, fig. 13 .....      | 11    |
| <i>Clavatula</i> , ? Swains. ....                                   | 11    |
| <i>C. ? californica</i> , n. s., Conrad, 1855, pl. i, fig. 11 ..... | 11    |

FOSSILS OF THE MIOCENE AND RECENT FORMATIONS OF CALIFORNIA.

|                                                                          |       |
|--------------------------------------------------------------------------|-------|
| <i>Cardium</i> , Lin. ....                                               | 11    |
| <i>C. modestum</i> , n. s., Conrad, 1855, pl. ii, fig. 15 .....          | 11    |
| <i>Nuculana</i> , Lam. ....                                              | 11    |
| <i>N. decisa</i> , n. s., Conrad, 1855, pl. ii, fig. 19 .....            | 11-12 |
| <i>Corbula</i> .....                                                     | 12    |
| <i>C. diegoana</i> , n. s., Conrad, 1855, pl. ii, fig. 16 .....          | 12    |
| <i>Meretrix</i> , Lam. ....                                              | 12    |
| <i>M. unioeris</i> , n. s., Conrad, 1855, pl. ii, fig. 20 .....          | 12    |
| <i>M. decisa</i> , n. s., Conrad, 1855, pl. ii, fig. 27 .....            | 12    |
| <i>M. tularana</i> , n. s., Conrad, 1855, pl. ii, figs. 22, 22 a .....   | 12    |
| <i>Tellina</i> , Lin. ....                                               | 12    |
| <i>T. diegoana</i> , n. s., Conrad, 1855, pl. ii, fig. 28 .....          | 12    |
| <i>T. congesta</i> , n. s., Conrad, 1855, pl. ii, figs. 14, 18, 21 ..... | 12-13 |
| <i>T. pedroana</i> , n. s., Conrad, 1855, pl. ii, fig. 17 .....          | 13    |
| <i>Arca</i> , Lin. ....                                                  | 13    |
| <i>A. microdonta</i> , n. s., Conrad, 1855, pl. ii, fig. 29 .....        | 12    |
| <i>Tapes</i> .....                                                       | 13    |
| <i>T. diversum</i> , Sow., pl. ii, figs. 24, a, and 26 .....             | 13    |
| <i>Saxicava</i> Fleur de Bell .....                                      | 13    |
| <i>S. abrupta</i> , n. s., Conrad, 1855, pl. ii, figs. 25, 25 a .....    | 13    |
| <i>Petricola</i> , Lam. ....                                             |       |
| <i>P. pedroana</i> , n. s., Conrad, pl. ii, fig. 23 .....                | 13-14 |
| <i>Schizothærus</i> , Conrad .....                                       | 14    |
| <i>S. nuttalli</i> , n. s., Conrad, 1855, pl. iii, figs. 33, 33 a .....  | 14    |
| <i>Lutraria</i> ?, Lam. ....                                             | 14    |
| <i>L. traskei</i> , n. s., Conrad, 1855, pl. iii, fig. 30 .....          | 14    |
| <i>Mactra</i> , Lin. ....                                                | 14    |
| <i>M. diegoana</i> , n. s., Conrad, 1855, pl. iv, fig. 35 .....          | 14    |
| <i>Modiola</i> , Lam. ....                                               | 14    |
| <i>M. contracta</i> , n. s., Conrad, 1855, pl. iv, fig. 35 .....         | 14    |
| <i>Mytilus</i> , Lin. ....                                               | 15    |
| <i>M. pedroanus</i> , n. s., Conrad, 1855, pl. —, fig. 40 .....          | 15    |
| <i>Pecten</i> , Lin. ....                                                | 15    |
| <i>P. deserti</i> , n. s., Conrad, 1855, pl. —, fig. 41 .....            | 15    |
| <i>Anomia</i> , Lin. ....                                                | 15    |
| <i>A. subcostata</i> , n. s., Conrad, 1855, pl. —, fig. 34 .....         | 15    |
| <i>Ostrea</i> , Lin. ....                                                | 15    |
| <i>O. vespertina</i> , Conrad, 1855, pl. —, fig. 36-38 .....             | 15    |



|                                                                                        | Page. |
|----------------------------------------------------------------------------------------|-------|
| <i>O. heermanni</i> , Conrad .....                                                     | 15-16 |
| <i>Pontella</i> .....                                                                  | 16    |
| <i>P. spelæum</i> , n. s., Conrad, 1855, pl. —, figs. 43, 43 <i>a</i> , <i>b</i> ..... | 16    |
| <i>Fissurella</i> , Lam. ....                                                          | 16    |
| <i>F. crenulata</i> , Sow., pl. —, fig. 44. ....                                       | 16    |
| <i>Orepidula</i> , Lam., <i>Crypta</i> , Humph. ....                                   | 16    |
| <i>O. princeps</i> , n. s., Conrad, 1855, pl. —, fig. 52 .....                         | 16    |
| <i>Natica</i> .....                                                                    | 16    |
| <i>N. diegoana</i> , n. s., Conrad, 1855, pl. —, fig. 39 .....                         | 16    |
| <i>Trochita</i> , Schum. ....                                                          | 17    |
| <i>T. diegoana</i> , n. s., Conrad, 1855, pl. —, fig. 42 .....                         | 17    |
| <i>Crucibulum</i> , Shum. ....                                                         | 17    |
| <i>C. spinosum</i> , n. s., Conrad, 1855, pl. —, fig. 46. ....                         | 17    |
| <i>Nassa</i> , Lam. ....                                                               | 17    |
| <i>N. int[er]striata</i> , n. s., Conrad, 1855, pl. —, fig. 49. ....                   | 17    |
| <i>N. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 48. ....                         | 17    |
| <i>Strophona</i> , Browne, <i>Oliva</i> , Lam. ....                                    | 17    |
| <i>S. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 51. ....                         | 17    |
| <i>Littorina</i> , Ferr. ....                                                          | 17    |
| <i>L. pedroana</i> , n. s., Conrad, 1855, pl. —, fig. 50. ....                         | 17    |
| <i>Stramonita</i> , Shum., <i>Purpura</i> , Lam. ....                                  | 17    |
| <i>S. petrosa</i> , n. s., Conrad, 1855, pl. —, fig. 47, 47 <i>a</i> . ....            | 17-18 |

## TERTIARY SHELLS OF THE ISTHMUS OF DARIEN.

## Miocene?

|                                                                  |    |
|------------------------------------------------------------------|----|
| <i>Gratulopia</i> ? Desmoulins .....                             | 18 |
| <i>G. mactropsis</i> , n. s., Conrad, 1855, pl. —, fig. 54. .... | 18 |
| <i>Meretrix</i> .....                                            | 18 |
| <i>M. dariena</i> , n. s., Conrad, 1855, pl. —, fig. 55. ....    | 18 |
| <i>Tellina</i> , Lin. ....                                       | 18 |
| <i>T. dariena</i> , n. s., Conrad, 1855, pl. —, fig. 53. ....    | 19 |

## MIOCENE FOSSILS FROM OCOYA CREEK.

|                                                                                              |       |
|----------------------------------------------------------------------------------------------|-------|
| <i>Natica</i> .....                                                                          | 18    |
| <i>N. ocoyana</i> , n. s., Conrad, 1855, pl. vi, fig. 57 .....                               | 18    |
| <i>N. geniculata</i> , n. s., Conrad, 1855, pl. vi, fig. 67 .....                            | 18-19 |
| <i>Bulla</i> .....                                                                           | 19    |
| <i>B. jugularis</i> , n. s., Conrad, 1855, pl. vi, figs. 62, 62 <i>a</i> , <i>b</i> .....    | 19    |
| <i>Pleurotoma</i> .....                                                                      | 19    |
| <i>P. transmontana</i> , n. s., Conrad, 1855, pl. vi, fig. 69 .....                          | 19    |
| <i>P. ocoyana</i> , n. s., Conrad, 1855, pl. vi, fig. 71 .....                               | 19    |
| <i>Succotopus</i> .....                                                                      | 19    |
| <i>S. ocoyanus</i> , n. s., Conrad, 1855, pl. vi, fig. 72. ....                              | 19    |
| <i>Turritella</i> .....                                                                      | 19    |
| <i>T. ocoyana</i> , n. s., Conrad, 1855, pl. vii, figs. 73, 73 <i>a</i> , 73 <i>b</i> . .... | 19    |
| <i>Colus</i> .....                                                                           | 19    |
| <i>C. aretatus</i> , n. s., Conrad, 1855, pl. vii, fig. 76. ....                             | 19    |
| <i>Tellina</i> .....                                                                         | 19    |
| <i>T. ocoyana</i> , n. s., Conrad, 1855, pl. vii, fig. 75 .....                              | 19    |
| <i>Pecten</i> .....                                                                          | 19    |
| <i>P. nevadanus</i> , n. s., Conrad, 1855, pl. vii, fig. 77 .....                            | 16    |
| <i>P. catilliformis</i> , n. s., Conrad, 1855, pl. viii, fig. 83. ....                       | 20    |

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|                 | Page.   |
|-----------------|---------|
| Catalogue ..... | 318-320 |

## DESCRIPTIONS OF FOSSIL SHELLS FROM THE EOCENE AND MIOCENE FORMATIONS OF CALIFORNIA.

## Eocene.

|                                                       |     |
|-------------------------------------------------------|-----|
| <i>Cardium</i> , Lin. ....                            | 320 |
| <i>C. luteum</i> , Conrad, 1855, pl. ii, fig. 1 ..... | 320 |
| <i>Dosinia</i> , Scopoli .....                        | 320 |

|                                                                     | Page.   |
|---------------------------------------------------------------------|---------|
| <i>D. alta</i> , Conrad, 1855, pl. ii, fig. 2 .....                 | 320     |
| <i>Meretrix</i> , Lam.— <i>Cytherea</i> , Lam .....                 | 320     |
| <i>M. wasana</i> , Conrad, 1855, pl. ii, fig. 3 .....               | 320     |
| <i>M. californiana</i> , Conrad, 1855, pl. ii, fig. 4 .....         | 320     |
| <i>Crassatella</i> , Lam. ....                                      | 320     |
| <i>C. wasana</i> , Conrad, 1855, pl. ii, fig. 5 .....               | 320-321 |
| <i>C. alta</i> , Conrad, 1855 .....                                 | 321     |
| <i>Mytilus</i> , Lin. ....                                          | 321     |
| <i>M. humeros</i> , Conrad, 1855, pl. ii, fig. 10 .....             | 321     |
| <i>Cardita</i> , Brug. ....                                         | 321     |
| <i>C. planicosta</i> , Conrad, 1855, pl. ii, fig. 6 .....           | 321     |
| <i>Natica</i> , Adamson .....                                       | 321     |
| <i>N. attites</i> ? Conrad, 1833, pl. ii, fig. 7 .....              | 321     |
| <i>N. gibbosa</i> and <i>semilunata</i> , Lea, 1833 .....           | 321     |
| <i>N. alveata</i> , Conrad, pl. ii, figs. 8, 8 a .....              | 321     |
| <i>Turritella</i> , Lam. ....                                       | 321     |
| <i>T. wasana</i> , Conrad, 1855, pl. ii, fig. 12 .....              | 321-322 |
| <i>Voluta</i> [ <i>l</i> ] <i>ithes</i> , Swains. ....              | 322     |
| <i>V. californiana</i> , Conrad, 1855, pl. ii, fig. 9 .....         | 322     |
| <i>Busyon</i> ? .....                                               | 322     |
| <i>B.?</i> <i>blakei</i> , Conrad, 1855, pl. ii, fig. 13 .....      | 322     |
| <i>Clavatula</i> ? Swains. ....                                     | 322     |
| <i>C.?</i> <i>californica</i> , Conrad, 1855, pl. ii, fig. 11 ..... | 322     |

FOSSILS OF THE MIOCENE AND RECENT FORMATIONS OF CALIFORNIA.

|                                                                          |         |
|--------------------------------------------------------------------------|---------|
| <i>Cardium</i> , Lin. ....                                               | 322     |
| <i>C. modestum</i> , Conrad, 1855, pl. iii, fig. 15 .....                | 322     |
| <i>Nucula</i> , Lam. ....                                                | 322     |
| <i>N. decisa</i> , Conrad, 1855, pl. iii, fig. 19 .....                  | 322     |
| <i>Corbula</i> .....                                                     | 322     |
| <i>C. diegoana</i> , Conrad, 1855, pl. iii, fig. 16 .....                | 322-323 |
| <i>Meretrix</i> , Lam. ....                                              | 323     |
| <i>M. unioeris</i> , Conrad, 1855, pl. iii, fig. 20 .....                | 323     |
| <i>M. decisa</i> , Conrad, 1855, pl. iii, fig. 27 .....                  | 323     |
| <i>M. tularana</i> , Conrad, 1855, pl. iii, fig. 22, 22 a .....          | 323     |
| <i>Tellina</i> , Lin. ....                                               | 323     |
| <i>T. diegoana</i> , Conrad, 1855, pl. iii, fig. 28 .....                | 323     |
| <i>T. congesta</i> , Conrad, 1855, pl. iii, figs. 14, 18, 21, 21 a ..... | 323     |
| <i>T. pedroana</i> , Conrad, 1855, pl. iii, fig. 17 .....                | 323     |
| <i>Arca</i> , Lin. ....                                                  | 323     |
| <i>A. microdonta</i> , Conrad, 1855, pl. iii, fig. 29 .....              | 323-324 |
| <i>Tapes</i> .....                                                       | 324     |
| <i>T. diversum</i> , Sow., pl. iv, figs. 31, 32 a, b .....               | 324     |
| <i>Saxicava</i> , Fleur de Bell .....                                    | 324     |
| <i>S. abrupta</i> , Conrad, 1855, pl. iii, figs. 25, 25 a .....          | 324     |
| <i>Petricola</i> , Lam. ....                                             | 324     |
| <i>P. pedroana</i> , Conrad, 1855, pl. iii, fig. 24 .....                | 324     |
| <i>Schizothaerus</i> , Conrad. ....                                      | 324     |
| <i>S. nutalli</i> , Conrad, 1855, pl. iv, figs. 23, 33 a .....           | 324     |
| <i>Lutraria</i> ? Lam .....                                              | 324     |
| <i>L. traski</i> , Conrad, 1855, pl. iii, fig. 23 .....                  | 324-325 |
| <i>Maetra</i> , Lin. ....                                                | 325     |
| <i>M. diegoana</i> , Conrad, 1855, pl. v, fig. 45 .....                  | 325     |
| <i>Modiola</i> , Lam. ....                                               | 325     |
| <i>M. contracta</i> , Conrad, pl. v, fig. 35 .....                       | 325     |
| <i>Mytilus</i> , Lin. ....                                               | 325     |
| <i>M. pedroanus</i> , Conrad, 1855, pl. v, fig. 40 .....                 | 325     |
| <i>Pecten</i> , Lin. ....                                                | 325     |
| <i>P. deserti</i> , Conrad, 1855, pl. v, fig. 41 .....                   | 325     |
| <i>Anomia</i> .....                                                      | 325     |
| <i>A. subcostata</i> , Conrad, 1855, pl. v, fig. 34 .....                | 325     |
| <i>Ostrea</i> , Lin. ....                                                | 325     |
| <i>O. vespertina</i> , Conrad, 1855, pl. v, figs. 36-38 .....            | 325-326 |
| <i>O. heermanni</i> , Conrad, 1855, pl. —, figs. — .....                 | 326     |

|                                                                                | Page. |
|--------------------------------------------------------------------------------|-------|
| <i>Penitella</i> .....                                                         | 326   |
| <i>P. spelæa</i> , Conrad, 1855, pl. v, figs. 43, 43 <i>a</i> , <i>b</i> ..... | 326   |
| <i>Pissurella</i> , Lam. ....                                                  | 326   |
| <i>P. crenulata</i> , Sow., pl. v, fig. 44 .....                               | 326   |
| <i>Crepidula</i> , Lam., <i>Crypta</i> , Humph. ....                           | 326   |
| <i>C. princeps</i> , Conrad, 1855, pl. vi, figs. 52, 52 <i>a</i> .....         | 326   |
| <i>Narica</i> .....                                                            | 326   |
| <i>N. diegoana</i> , Conrad, 1855, pl. v, fig. 39 .....                        | 326   |
| <i>Trochita</i> , Shum. ....                                                   | 327   |
| <i>T. diegoana</i> , Conrad, 1855, pl. v, fig. 42 .....                        | 327   |
| <i>Cruciatula</i> , Shum. ....                                                 | 327   |
| <i>C. spinosum</i> , Conrad, 1855, pl. v, figs. 46, 46 <i>a</i> .....          | 327   |
| <i>Nassa</i> , Lam. ....                                                       | 327   |
| <i>N. interstriata</i> , Conrad, 1855, pl. vi, fig. 49 .....                   | 327   |
| <i>N. pedroana</i> , Conrad, 1855, pl. vi, fig. 48 .....                       | 327   |
| <i>Strophona</i> , Browne, <i>Oliva</i> , Lam. ....                            | 327   |
| <i>S. pedroana</i> , Conrad, 1855, pl. vi, fig. 51 .....                       | 327   |
| <i>Littorina</i> , Ferr. ....                                                  | 327   |
| <i>L. pedroana</i> , Conrad, 1855, pl. vi, fig. 50 .....                       | 327   |
| <i>Stramonita</i> , Shum., <i>Purpura</i> , Lam. ....                          | 327   |
| <i>S. petrosa</i> , Conrad, 1855, pl. vi, figs. 47, 47 <i>a</i> .....          | 327   |

TERTIARY SHELLS OF THE ISTHMUS OF DARIEN.

*Miocene.*

|                                                              |     |
|--------------------------------------------------------------|-----|
| <i>Gratelupia?</i> Desmoulin. ....                           |     |
| <i>G. ? mactropsis</i> , Conrad, 1855, pl. vi, fig. 54 ..... | 328 |
| <i>Meretrix</i> .....                                        | 328 |
| <i>M. dariena</i> , Conrad, 1855, pl. vi, fig. 55 .....      | 328 |
| <i>Tellina</i> , Lin. ....                                   | 328 |
| <i>T. dariena</i> , Conrad, 1855, pl. vi, fig. 53 .....      | 328 |

MIOCENE FOSSILS FROM OCOYA CREEK.

|                                                                                     |         |
|-------------------------------------------------------------------------------------|---------|
| <i>Natica</i> .....                                                                 | 328     |
| <i>N. ocoyana</i> , Conrad, 1855, pl. vii, figs. 57, 57 <i>a</i> .....              | 328     |
| <i>N. geniculata</i> , Conrad, 1855, pl. vii, fig. 67 .....                         | 328     |
| <i>Bulla</i> .....                                                                  | 328     |
| <i>B. jugularis</i> , Conrad, 1856, pl. vii, figs. 62, 62 <i>a</i> , <i>b</i> ..... | 328     |
| <i>Pleurotoma</i> .....                                                             | 328     |
| <i>P. transmontana</i> , Conrad, 1855, pl. vi, fig. 69 .....                        | 328-329 |
| <i>Syetopus</i> .....                                                               | 329     |
| <i>S. ocoyanus</i> , Conrad, 1855, pl. vii, figs. 72, 72 <i>a</i> .....             | 329     |
| <i>Turritella</i> .....                                                             | 329     |
| <i>T. ocoyana</i> , Conrad, 1855, pl. viii, figs. 73, 73 <i>a</i> , <i>b</i> .....  | 329     |
| <i>Colus</i> .....                                                                  | 329     |
| <i>C. arcatus</i> , Conrad, 1855, pl. viii, fig. 76 .....                           | 329     |
| <i>Tellina</i> .....                                                                | 329     |
| <i>T. ocoyana</i> , Conrad, 1855, pl. viii, figs. 75, 75 <i>a</i> .....             | 329     |
| <i>Pecten</i> .....                                                                 | 329     |
| <i>P. neradanus</i> , Conrad, 1855, pl. viii, fig. 77 .....                         | 329     |
| <i>P. catilliformis</i> , Conrad, 1855, pl. ix, fig. 83 .....                       | 329     |

6.

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|                                               | Page. |
|-----------------------------------------------|-------|
| <i>Rostellites</i> , Conrad .....             | 268   |
| <i>R. texanus</i> , n. s., Conrad, 1856 ..... | 268   |
| <i>Turritella</i> , Lam. ....                 | 268   |

|                                                     | Page. |
|-----------------------------------------------------|-------|
| <i>T. irrorata</i> , Conrad, n. s., 1856 .....      | 268   |
| <i>Caprina</i> .....                                | 268   |
| <i>C. planata</i> , n. s., Conrad, 1856 .....       | 268   |
| <i>C. occidentalis</i> , n. s., Conrad, 1856 .....  | 268   |
| <i>Neithea</i> , Drouet .....                       | 269   |
| <i>N. occidentalis</i> , n. s., Conrad, 1856 .....  | 269   |
| <i>Maetra</i> , Lin. ....                           | 269   |
| <i>M. texana</i> , n. s. Conrad, 1856 .....         | 269   |
| <i>Exogyra</i> , Say .....                          | 269   |
| <i>E. fragosa</i> , n. s., Conrad, 1856 .....       | 269   |
| <i>E. jimbriata</i> , n. s., Conrad, 1856 .....     | 269   |
| Tertiary species :                                  |       |
| <i>Ostrea contracta</i> , n. s., Conrad, 1856 ..... | 269   |

7.

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|                                                           | Page.   |
|-----------------------------------------------------------|---------|
| <i>Janira</i> , Shum. ....                                | 312     |
| <i>J. bella</i> , n. s., Conrad, 1857 .....               | 312-313 |
| <i>Pallium</i> , Klein .....                              | 313     |
| <i>P. estrellanum</i> , n. s., Conrad, 1857 .....         | 313     |
| <i>P. crassicardio</i> , n. s., Conrad, 1857 .....        | 313     |
| <i>Pecten</i> , Lin. ....                                 | 313     |
| <i>P. meekii</i> , n. s., Conrad, 1857 .....              | 313     |
| <i>P. altiplectus</i> , n. s., Conrad, 1857 .....         | 313     |
| <i>Pachypletesma</i> , Conrad .....                       | 313     |
| <i>P. inezana</i> , n. s., Conrad, 1857 .....             | 313     |
| <i>Mulinia</i> , Gray .....                               | 313     |
| <i>M. densata</i> , n. s., Conrad, 1857 .....             | 313     |
| <i>Thracia</i> , Leach .....                              | 313     |
| <i>T. mactropis</i> , n. s., Conrad, 1857 .....           | 313     |
| <i>Mya</i> , Lin. ....                                    | 313     |
| <i>M. montereyana</i> , n. s., Conrad, 1857 .....         | 313-314 |
| <i>Arca</i> , Lin. ....                                   | 314     |
| <i>A. canalis</i> , n. s., Conrad, 1857 .....             | 314     |
| <i>A. trilineata</i> , n. s., Conrad, 1857 .....          | 314     |
| <i>A. congesta</i> , n. s., Conrad, 1857 .....            | 314     |
| <i>Azinra</i> , Poli, <i>Pectunculus</i> , Lam. ....      | 314     |
| <i>Azinra barbarensis</i> , n. s., Conrad, 1857 .....     | 314     |
| <i>Arcopagia</i> .....                                    | 314     |
| <i>A. medialis</i> , n. s., Conrad, 1857 .....            | 314     |
| <i>Tapes</i> , Sowerby .....                              | 314     |
| <i>T. lineatum</i> , n. s., Conrad, 1857 .....            | 314     |
| <i>Cryptomya</i> , Conrad .....                           | 314     |
| <i>C. ovalis</i> , n. s., Conrad, 1857 .....              | 314     |
| <i>Cyclas</i> , Klein, <i>Lucina</i> , Lam. ....          | 314     |
| <i>Cyclas tetraea</i> , n. s., Conrad, 1857 .....         | 314     |
| <i>Spondylus estrallensis</i> , n. s., Conrad, 1857 ..... | 315     |
| <i>Dosinia</i> , Scopoli .....                            | 315     |
| <i>D. longula</i> , n. s., Conrad, 1857 .....             | 315     |
| <i>D. alta</i> , n. s., Conrad, 1857 .....                | 315     |
| <i>Lutraria</i> .....                                     | 315     |
| <i>L. transmontana</i> , n. s., Conrad, 1857 .....        | 315     |
| <i>Schizopyga</i> , n. g., Conrad, 1857 .....             | 315     |
| <i>S. californiana</i> , n. s., Conrad, 1857 .....        | 315     |
| <i>Tamiosoma</i> , n. g., Conrad, 1857 .....              | 315     |
| <i>T. gregaria</i> , n. s., Conrad, 1857 .....            | 315     |



## ECHINODERMS.

|                                                   | Page. |
|---------------------------------------------------|-------|
| <i>Astrodapsis</i> , n. g., Conrad, 1857 .....    | 315   |
| <i>A. antislalli</i> , n. s., Conrad, 1857 .....  | 315   |
| <i>Mellita texana</i> , n. s., Conrad, 1857 ..... | 316   |

## 8.

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## CALIFORNIA FOSSILS.

## Univalves.

|                                                                    | Page. |
|--------------------------------------------------------------------|-------|
| <i>Schizopyga</i> , n. s., Conrad, 1857 .....                      | 69    |
| <i>S. californiana</i> , n. s., Conrad, 1857, pl. ii, fig. 1 ..... | 69    |

## Bivalves.

|                                                                                    |       |
|------------------------------------------------------------------------------------|-------|
| <i>Cryptomya</i> , Conrad, 1857 .....                                              | 69    |
| <i>C. ovalis</i> , Conrad, 1856, pl. ii, fig. 2 .....                              | 69    |
| <i>Thracia</i> , Leach .....                                                       | 69    |
| <i>T. mactropis</i> , Conrad, 1856, pl. ii, fig. 3 .....                           | 69-70 |
| <i>Mya</i> , Lin. ....                                                             | 70    |
| <i>M. montereyana</i> , Conrad, 1856, pl. ii, fig. 4 .....                         | 70    |
| <i>M. ? subsinuata</i> , n. s., Conrad, 1857, pl. ii, fig. 5 .....                 | 70    |
| <i>Arcopagia</i> , Leach .....                                                     | 70    |
| <i>A. medialis</i> , Conrad, 1856, pl. ii, fig. 6 .....                            | 70    |
| <i>Tapes</i> , Sowerby .....                                                       | 70    |
| <i>T. linteatum</i> , Conrad, 1856, pl. ii, fig. 7 .....                           | 70    |
| <i>Arca</i> , Lin. ....                                                            | 70    |
| <i>A. canalis</i> , Conrad, 1856, pl. ii, fig. 8 .....                             | 70    |
| <i>A. trilineata</i> , Conrad, 1856, pl. ii, fig. 9 .....                          | 70    |
| <i>A. congesta</i> , Conrad, 1856, pl. ii, fig. 10 .....                           | 70-71 |
| <i>Arinca</i> , Poli, <i>Pectunculus</i> , Lam. ....                               | 71    |
| <i>A. barbarensis</i> , n. s., Conrad, 1857, pl. iii, fig. 11 .....                | 71    |
| <i>Mulinia</i> , Gray .....                                                        | 71    |
| <i>M. densata</i> , Conrad, 1856, pl. iii, fig. 12 .....                           | 71    |
| <i>Dosinia</i> , Scopoli .....                                                     | 71    |
| <i>D. longula</i> , Conrad, 1856 .....                                             | 71    |
| <i>D. alta</i> , Conrad, 1856, pl. iii, figs. 13 <i>a</i> , <i>b</i> .....         | 71    |
| <i>Pecten</i> , Lin. ....                                                          | 71    |
| <i>P. pabloensis</i> , n. s., Conrad, 1857, pl. iii, fig. 14 .....                 | 71    |
| <i>Pallium</i> , Klein .....                                                       | 71    |
| <i>P. estrellanum</i> , Conrad, 1856, pl. iii, fig. 15 .....                       | 71    |
| <i>Janira</i> , Shum. ....                                                         | 71    |
| <i>J. bella</i> , Conrad, 1856, pl. i, fig. 16 .....                               | 71-72 |
| <i>Ostrea</i> , Linn. ....                                                         | 72    |
| <i>O. titan</i> , Conrad, 1855, pl. iv, fig. 17, and pl. v, fig. 17 <i>a</i> ..... | 72    |

## FOSSILS OF GATUN, ISTHMUS OF DARIEN.

|                                                                              |       |
|------------------------------------------------------------------------------|-------|
| <i>Malea</i> , Valenc. ....                                                  | 72    |
| <i>M. ringens</i> , n. s., Conrad, 1857, pl. v, fig. 22 .....                | 72    |
| <i>Territella</i> , Lam. ....                                                | 72    |
| <i>T. altitira</i> , n. s., Conrad, 1857, pl. v, fig. 19 .....               | 72    |
| <i>T. gatunensis</i> , n. s., Conrad, 1857, pl. v, fig. 20 .....             | 72    |
| <i>Triton</i> , Lam. ....                                                    | 72    |
| <i>Cutherea</i> ? Lam. ....                                                  | 72    |
| <i>C. ? (Meretrix) dariena</i> , ? n. s., Conrad, 1857, pl. v, fig. 21 ..... | 72    |
| <i>Tamiosoma</i> , n. g., Conrad, 1857 .....                                 | 72    |
| <i>T. gregaria</i> , n. s., Conrad, 1857, pl. iv, fig. 18 .....              | 72-73 |
| <i>Pandora</i> , Lam. ....                                                   | 73    |
| <i>P. bilirata</i> , Conrad, 1855, pl. v, fig. 25 .....                      | 73    |
| <i>Cardita</i> , Brug. ....                                                  | 73    |
| <i>C. occidentalis</i> , Conrad, 1855, pl. v, fig. 24 .....                  | 73    |
| <i>Diadora</i> , Gray .....                                                  | 73    |
| <i>D. cruciuliformis</i> , Conrad, 1855, pl. v, fig. 23 .....                | 73    |

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|                                                                          | Page.   |
|--------------------------------------------------------------------------|---------|
| <i>Hinnites</i> , DeFrance .....                                         | 190     |
| <i>H. crassa</i> , n. s., Conrad, 1857, pl. ii, figs. 1, 2 .....         | 190     |
| <i>Pecten</i> , Lin. ....                                                | 190     |
| <i>P. meekii</i> , n. s., Conrad, 1857, pl. i, fig. 1 .....              | 190     |
| <i>P. deserti</i> , Conrad .....                                         | 190     |
| <i>P. discus</i> , n. s., Conrad, 1857, pl. iii, fig. 1 .....            | 190-191 |
| <i>P. magnolia</i> , n. s., Conrad, 1857, pl. i, fig. 2 .....            | 191     |
| <i>P. altiplicatus</i> , n. s., Conrad, 1857, pl. iii, fig. 2 .....      | 191     |
| <i>Pallium</i> , Conrad .....                                            | 191     |
| <i>P. estrellanum</i> , n. s., Conrad, 1857, pl. iii, figs. 3, 4 .....   | 191     |
| <i>Spondylus</i> , Rond., Lam. ....                                      | 191     |
| <i>S. estrellanus</i> , n. s., Conrad, 1857, pl. i, fig. 3 .....         | 191     |
| <i>Tapes</i> ? Mühlb. ....                                               | 192     |
| <i>T. montana</i> , n. s., Conrad, 1857, pl. v, figs. 3, 5 .....         | 192     |
| <i>T. inezensis</i> , n. s., Conrad, 1857, pl. vii, fig. 1 .....         | 192     |
| <i>Venus</i> , Lin. ....                                                 | 192     |
| <i>V. paljarounda</i> , n. s., Conrad, 1857, pl. iv, figs. 1, 2 .....    | 192     |
| <i>Arcopagia</i> , Brown .....                                           | 192     |
| <i>A. unda</i> , n. s., Conrad, 1857, pl. iv, figs. 3, 4 .....           | 192     |
| <i>Cyclas</i> , Klem. <i>Lucina</i> , Lam. ....                          | 192     |
| <i>C. permacra</i> , n. s., Conrad, 1857, pl. vii, fig. 4 .....          | 192     |
| <i>C. estrellana</i> , n. s., Conrad, 1857, pl. vi, fig. 6 .....         | 192     |
| <i>Arca</i> , Lin. ....                                                  | 192     |
| <i>A. hispanna</i> , n. s., Conrad, 1857, pl. v, fig. 1 .....            | 192     |
| <i>Pachydesma</i> , Conrad .....                                         | 193     |
| <i>P. inezana</i> , n. s., Conrad, 1857, pl. v, figs. 2, 4 .....         | 193     |
| <i>Crassatella</i> , Lam. ....                                           | 193     |
| <i>C. collina</i> , n. s., Conrad, 1857, pl. vi, figs. 1, 2 .....        | 193     |
| <i>Ostrea</i> , Lin. ....                                                | 193     |
| <i>O. subjecta</i> , n. s., Conrad, 1857, pl. ii, fig. 3 .....           | 193     |
| <i>O. panzana</i> , n. s., Conrad, 1857, pl. ii, fig. 4 .....            | 193     |
| <i>Dosinia</i> Scopoli, <i>Athenis</i> Poli .....                        | 193     |
| <i>D. alta</i> , n. s., Conrad, 1857, pl. —, fig. — .....                | 193     |
| <i>D. longula</i> , n. s., Conrad, 1857, pl. vii, fig. 2 .....           | 193-194 |
| <i>D. montana</i> , n. s., Conrad, 1857, pl. vi, fig. 4 .....            | 194     |
| <i>D. subobliqua</i> , n. s., Conrad, 1857, pl. vi, fig. 5 .....         | 194     |
| <i>Mytilus</i> , Lin. ....                                               | 194     |
| <i>M. inezensis</i> , n. s., Conrad, 1857, pl. viii, figs. 2, 3 .....    | 194     |
| <i>Lutraria</i> , Lam. ....                                              | 194     |
| <i>L. transmontana</i> , n. s., Conrad, 1857, pl. v, fig. 6 .....        | 194     |
| <i>Atrina</i> , Sow., <i>Pectunculus</i> , Lam. ....                     | 194     |
| <i>A. barbarensis</i> , n. s., Conrad, 1857, pl. vi, fig. 3 .....        | 194     |
| <i>Mactra</i> ? .....                                                    | 194     |
| <i>M. ? gabiotensis</i> , n. s., Conrad, 1857, pl. vii, fig. 4 .....     | 194     |
| <i>Glycymeris</i> , Lam., <i>Panopæa</i> , Menard .....                  | 194     |
| <i>G. estrellanus</i> , n. s., Conrad, 1857, pl. vii, fig. 5 .....       | 194     |
| <i>Perna</i> , Lam. ....                                                 | 195     |
| <i>P. montana</i> , n. s., Conrad, 1857, pl. —, fig. — .....             | 195     |
| Univalves.                                                               |         |
| <i>Trochita</i> .....                                                    | 195     |
| <i>T. costellata</i> , n. s., Conrad, 1857, pl. vii, fig. 3 .....        | 195     |
| <i>Turritella</i> , Lam. ....                                            | 195     |
| <i>T. inezana</i> , n. s., Conrad, 1857, pl. viii, fig. 4 .....          | 195     |
| <i>T. variata</i> , n. s., Conrad, 1857, pl. viii, fig. 5 .....          | 195     |
| <i>Natica</i> .....                                                      | 195     |
| <i>N. inezana</i> , n. s., Conrad, 1857, pl. x, figs. 5, 6 .....         | 195     |
| Multivalves.                                                             |         |
| <i>Balanus estrellanus</i> , n. s., Conrad, 1857, pl. viii, fig. 1 ..... | 195     |
| Echinoderm.                                                              |         |
| <i>Astrodapsis</i> , Conrad .....                                        | 196     |
| <i>A. antiscilli</i> , n. s., Conrad, 1857, pl. x, figs. 1, 2 .....      | 196     |

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|                                                                                                  | Page.   |
|--------------------------------------------------------------------------------------------------|---------|
| Eocene species.....                                                                              | 141     |
| Cretaceous fossils from Oak Creek, Texas.....                                                    | 141     |
| Cretaceous fossils from between Rio San Pedro and Rio Puercos.....                               | 142     |
| Cretaceous fossils from between El Paso and Frontera.....                                        | 142     |
| Cretaceous fossils from Leon Springs.....                                                        | 142     |
| Cretaceous fossils from Jacun, 3 miles below Laredo.....                                         | 143     |
| Cretaceous fossils from Lepan Hills.....                                                         | 143     |
| Cretaceous ? fossils from Dry Creek, Mexico.....                                                 | 143     |
| Cretaceous fossils from various localities.....                                                  | 143     |
| <i>Polypi:</i>                                                                                   |         |
| <i>Turbinolia</i> , Lam.....                                                                     | 144     |
| <i>T. texana</i> , n. s., Conrad, 1857, pl. ii, figs. 3 <i>a</i> , <i>b</i> .....                | 144     |
| <i>Bivalves:</i>                                                                                 |         |
| <i>Caprina</i> , D'Orbigny.....                                                                  | 147     |
| <i>C. occidentalis</i> , Conrad, pl. ii, figs. 1 <i>a-c</i> .....                                | 147     |
| <i>C. planata</i> , Conrad, pl. ii, figs. 2 <i>a</i> , <i>b</i> .....                            | 147     |
| <i>Terebratula</i> , Lhwyd., Lam.....                                                            | 147     |
| <i>T. wacoensis</i> , Roemer, pl. iii, fig. 1.....                                               | 147     |
| <i>T. choctawensis</i> , Shumard.....                                                            | 147     |
| <i>Trigonia</i> , Lam.....                                                                       | 147     |
| <i>T. emoryi</i> , Conrad, pl. iii, fig. 2 <i>a-c</i> .....                                      | 148     |
| <i>T. texana</i> , n. s., Conrad, 1857, pl. iii, figs. 3 <i>a-c</i> .....                        | 148     |
| <i>Maetra</i> , Lin., Lam.....                                                                   | 148     |
| <i>M. texana</i> , Conrad, pl. iv, figs. 1 <i>a</i> , <i>b</i> .....                             | 148     |
| <i>Cucullaea</i> , Lam.....                                                                      | 148     |
| <i>C. terminalis</i> , n. s., Conrad, 1857, pl. iv, figs. 2 <i>a</i> , <i>b</i> .....            | 148     |
| <i>Arca</i> , Lin.....                                                                           | 148     |
| <i>A. subelongata</i> , n. s., Conrad, 1857, pl. vi, figs. 3 <i>a</i> , <i>b</i> .....           | 148     |
| <i>Arcopagia</i> .....                                                                           | 149     |
| <i>A. texana</i> , Roemer, pl. iv, figs. 3 <i>a</i> , <i>b</i> .....                             | 149     |
| <i>Cardium</i> , Lin., Lam.....                                                                  | 149     |
| <i>C. mediale</i> , n. s., Conrad, 1857, pl. iv, figs. 4 <i>a</i> , <i>b</i> .....               | 149     |
| <i>C. congestum</i> , n. s., Conrad, 1857, pl. vi, figs. 5 <i>a-d</i> .....                      | 149     |
| Subgenus <i>Protocardia</i> , Beyrich.....                                                       | 149     |
| <i>C. (Protocardia) multistriatum</i> , Shumard, pl. vi, figs. 4 <i>a-c</i> .....                | 149     |
| <i>C. (Protocardia) texanum</i> , n. s., Conrad, 1857, pl. v, figs. 6 <i>a-c</i> .....           | 150     |
| <i>C. (Protocardia) filotum</i> , n. s., Conrad, 1857, pl. vi, figs. 7 <i>a</i> , <i>b</i> ..... | 150     |
| <i>Cardita</i> , Lam., Blainville.....                                                           | 150     |
| <i>C. eminula</i> , n. s., Conrad, 1857, pl. vi, fig. 8.....                                     | 150     |
| <i>Corbula</i> .....                                                                             | 150     |
| <i>C. occidentalis</i> , n. s., Conrad, 1857, pl. vi, fig. 9.....                                | 150     |
| <i>Neithea</i> , Dronet.....                                                                     | 150     |
| <i>N. occidentalis</i> , Conrad, pl. v, figs. 1 <i>a</i> , <i>b</i> .....                        | 150-151 |
| <i>N. texana</i> , Roemer, sp., pl. v, figs. 2 <i>a</i> , <i>b</i> .....                         | 151     |
| <i>Lina</i> .....                                                                                | 151     |
| <i>L. wacoensis</i> , Roemer, sp., pl. v, figs. 4 <i>a</i> , <i>b</i> .....                      | 151     |
| <i>L. leonensis</i> , n. s., Conrad, 1857, pl. v, figs. 3 <i>a-c</i> .....                       | 151     |
| <i>Inoceramus</i> , Sowerby.....                                                                 | 151     |
| <i>I. confertim-annulatus</i> , Roemer, sp., pl. v, fig. 5.....                                  | 151     |
| <i>I. mytilopsis</i> , n. s., Conrad, 1857, pl. v, figs. 6 <i>a</i> , <i>b</i> .....             | 152     |
| <i>I. texanus</i> , n. s., Conrad, 1857, pl. v, fig. 7.....                                      | 152     |
| <i>I. crispii</i> , Mantell, pl. v, fig. 8.....                                                  | 152     |
| <i>Pholadomya</i> , Sowerby.....                                                                 | 152     |
| <i>P. texana</i> , n. s., Conrad, 1857, pl. xix, fig. 3.....                                     | 152     |
| <i>Astarte</i> , Sowerby.....                                                                    | 152     |
| <i>A. texana</i> , n. s., Conrad, 1857, pl. v, fig. 9.....                                       | 152     |
| <i>Guthriea</i> , Lam.....                                                                       | 153     |
| <i>G. leonensis</i> , n. s., Conrad, 1857, pl. vi, fig. 1.....                                   | 153     |
| <i>G. texana</i> , n. s., Conrad, 1857, pl. vi, fig. 2.....                                      | 153     |
| <i>Plicatula</i> , Lam.....                                                                      | 153     |

|                                                                                                                      | Page.   |
|----------------------------------------------------------------------------------------------------------------------|---------|
| <i>P. incongrua</i> , n. s., Conrad, 1857, pl. vi, figs. 10 <i>a</i> , <i>b</i> . . . . .                            | 153     |
| <i>Exogyra</i> , Say . . . . .                                                                                       | 153     |
| <i>E. arietina</i> , Römer, pl. vii, figs. 1 <i>a-c</i> . . . . .                                                    | 153     |
| <i>E. fimbriata</i> , Conrad, pl. vii, figs. 2 <i>a</i> , <i>b</i> . . . . .                                         | 154     |
| <i>E. læviuscula</i> , Römer, pl. vii, figs. 4 <i>a</i> , <i>b</i> . . . . .                                         | 154     |
| <i>E. matheroniana</i> , d'Orbigny, pl. viii, figs. 1 <i>a-c</i> , and pl. xi, figs. 1 <i>a</i> , <i>b</i> . . . . . | 154     |
| <i>E. costata</i> var. Conrad, 1857, pl. viii, fig. 2 . . . . .                                                      | 154     |
| <i>E. costata</i> , Say, pl. ix, figs. 1 and 2, and pl. x, fig. 1, and pl. viii, fig. 3 . . . . .                    | 154-155 |
| <i>E. fragosa</i> , Conrad, pl. viii, figs. 2 <i>a</i> , <i>b</i> . . . . .                                          | 155     |
| <i>Gryphæa</i> , Lam . . . . .                                                                                       | 155     |
| <i>G. pitcheri</i> , Morton, pl. vii, fig. 3, and pl. x, figs. 2 <i>a</i> , <i>b</i> . . . . .                       | 155     |
| <i>Ostrea</i> , Linn . . . . .                                                                                       | 150     |
| <i>O. subspatulata</i> , Lyell & Sowerby, pl. x, figs. 3 <i>a</i> , <i>b</i> . . . . .                               | 155-156 |
| <i>O. bella</i> , n. s., Conrad, 1857, pl. x, figs. 4 <i>a</i> , <i>b</i> . . . . .                                  | 156     |
| <i>O. lugubris</i> , n. s., Conrad, 1857, pl. x, figs. 5 <i>a</i> , <i>b</i> . . . . .                               | 156     |
| <i>O. carinata</i> , Lam., pl. x, fig. 6 . . . . .                                                                   | 156     |
| <i>O. vellicata</i> , n. s., Conrad, 1857, pl. xi, figs. 2 <i>a</i> , <i>b</i> . . . . .                             | 156     |
| <i>O. robusta</i> , n. s., Conrad, 1857, pl. xi, figs. 3 <i>a</i> , <i>b</i> . . . . .                               | 156-157 |
| <i>O. cortex</i> , n. s., Conrad, 1857, pl. xi, figs. 4 <i>a-d</i> . . . . .                                         | 157     |
| <i>O. multilirata</i> , n. s., Conrad, 1857, pl. xii, figs. 1 <i>a-d</i> . . . . .                                   | 157     |
| Univalves:                                                                                                           |         |
| <i>Natica</i> , Lam . . . . .                                                                                        | 157     |
| <i>N. texana</i> , n. s., Conrad, 1857, pl. xiii, figs. 1 <i>a</i> , <i>b</i> . . . . .                              | 157     |
| <i>N. collina</i> , n. s., Conrad, 1857, pl. xiii, figs. 2 <i>a</i> , <i>b</i> . . . . .                             | 157     |
| <i>Rostellaria</i> ? Lam . . . . .                                                                                   | 157     |
| <i>R. ? collina</i> , n. s., Conrad, 1857, pl. xiii, figs. 3 <i>a</i> , <i>b</i> . . . . .                           | 157     |
| <i>R. ? collina</i> [ <i>texana</i> ], n. s., Conrad, 1857, pl. xiii, figs. 4 <i>a</i> , <i>b</i> . . . . .          | 158     |
| <i>Buccinopsis</i> . . . . .                                                                                         | 158     |
| <i>B. parryi</i> , n. s., Conrad, 1857, pl. xiii, figs. 5 <i>a</i> , <i>b</i> . . . . .                              | 158     |
| <i>Turritella</i> , Lam . . . . .                                                                                    | 158     |
| <i>T. planilateris</i> , n. s., Conrad, 1857, pl. xiv, figs. 1 <i>a</i> , <i>b</i> . . . . .                         | 158     |
| <i>Rostellites</i> , Conrad . . . . .                                                                                | 158     |
| <i>R. texana</i> , Conrad, pl. xiv, figs. 2 <i>a</i> , <i>b</i> . . . . .                                            | 158     |
| <i>Nerinea</i> , DeFrance . . . . .                                                                                  | 158     |
| <i>N. schottii</i> , n. s., Conrad, 1857, pl. xiv, figs. 3 <i>a</i> , <i>b</i> . . . . .                             | 158-159 |
| <i>Nodosaria</i> , Lam . . . . .                                                                                     | 159     |
| <i>N. texana</i> , n. s., Conrad, 1857, pl. xiv, figs. 4 <i>a-c</i> . . . . .                                        | 159     |
| <i>Ammonites</i> , Lam . . . . .                                                                                     | 159     |
| <i>A. pleurisepta</i> , n. s., Conrad, 1857, pl. xv, figs. 1 <i>a-c</i> . . . . .                                    | 159     |
| <i>A. geniculatus</i> , n. s., Conrad, 1857, pl. xv, figs. 2 <i>a</i> , <i>b</i> . . . . .                           | 159     |
| <i>A. texanus</i> , Römer, pl. xvi, figs. 1 <i>a-d</i> . . . . .                                                     | 159-160 |
| <i>A. leonensis</i> , n. s., Conrad, 1857, pl. xvi, figs. 2 <i>a</i> , <i>b</i> . . . . .                            | 160     |
| TERTIARY FOSSILS.                                                                                                    |         |
| <i>Ostrea</i> , Lin . . . . .                                                                                        | 160     |
| <i>O. vespertina</i> , Conrad, pl. xvii, figs. 1 <i>a-d</i> . . . . .                                                | 160     |
| <i>O. veleniana</i> , n. s., Conrad, 1857, pl. xvii, figs. 2 <i>a</i> , <i>b</i> . . . . .                           | 160     |
| <i>O. contracta</i> , Conrad, pl. xviii, <i>a-d</i> . . . . .                                                        | 160-161 |
| <i>Anomia</i> , Lin . . . . .                                                                                        | 161     |
| <i>A. subcostata</i> , Conrad, pl. xix, figs. 1 <i>a</i> , <i>b</i> . . . . .                                        | 161     |
| <i>Cardita</i> , (Lam.) Blain . . . . .                                                                              | 161     |
| <i>C. planicosta</i> , Lam., pl. xix, figs. 2, <i>a</i> , <i>b</i> . . . . .                                         | 161     |
| <i>Corbula</i> , Lam . . . . .                                                                                       | 161     |
| <i>C. nasuta</i> , Conrad, pl. xix, fig. 4 . . . . .                                                                 | 161     |
| <i>Venus vespertina</i> , n. s., Conrad, 1857, pl. xix, figs. 5 <i>a</i> , <i>b</i> . . . . .                        | 162     |
| <i>Cytherea</i> , Lam . . . . .                                                                                      | 162     |
| <i>C. nuttali</i> , Conrad, pl. iv, fig. 5 . . . . .                                                                 | 162     |
| <i>Volatalithes</i> , Swainson . . . . .                                                                             | 162     |
| <i>V. sayana</i> , Conrad, pl. xix, fig. 6 . . . . .                                                                 | 162     |
| <i>Natica</i> , Lam . . . . .                                                                                        | 162     |
| <i>N. limula</i> , Conrad, pl. xix, fig. 7 . . . . .                                                                 | 162     |
| <i>Turritella</i> , Lam . . . . .                                                                                    | 163     |
| <i>Turritella</i> , ———, Conrad, 1857, pl. xix, fig. 8 . . . . .                                                     | 163     |
| <i>Cassidula</i> , Humphreys . . . . .                                                                               | 163     |
| Subgenus <i>Lacinia</i> , Conrad . . . . .                                                                           | 163     |
| <i>C. (Lacinia) alveata</i> , Conrad, pl. xix, fig. 9 . . . . .                                                      | 163     |



## APPENDIX.

## Cretaceous fossils.

|                                                                                | Page. |
|--------------------------------------------------------------------------------|-------|
| <i>Cardita subtetrica</i> , n. s., Conrad, 1857, pl. xxi, fig. 5 .....         | 164   |
| <i>Pholadomya sancti-sabæ</i> , Rømer, pl. xxi, fig. 4 .....                   | 164   |
| <i>Cypst.</i> , Lam. ....                                                      | 164   |
| <i>C. texana</i> , n. s., Conrad, 1857, pl. xxi, fig. 6 .....                  | 164   |
| <i>Terebratula leonensis</i> , n. s., Conrad, 1857, pl. xxi, fig. 2.....       | 165   |
| <i>Turritella leonensis</i> , n. s.; Conrad, 1857, pl. xxi, figs. 7 a, b ..... | 165   |
| <i>Hamites larvatus</i> , Conrad, pl. xxi, fig. 8 .....                        | 165   |

## 11.

Conrad, T. A. Check list of the Invertebrate Fossils of North America. Eocene and Oligocene. <Smithsonian miscellaneous collections, 200 pp., i-iv, and 1-41. Washington, 1866.

## NOTES AND EXPLANATIONS.

|                                                                                                                      | Page. |
|----------------------------------------------------------------------------------------------------------------------|-------|
| <i>Nummulites floridana</i> , Conrad= <i>Nemophora floridana</i> , Con. ....                                         | 33    |
| <i>Turbinolia goldfussii</i> , Lea= <i>Platytrochus goldfussii</i> (Lea), Edwards.....                               | 33    |
| <i>Turbinolia stokesii</i> , Lea= <i>Platytrochus stokesii</i> (Lea), Edwards.....                                   | 33    |
| <i>Anthophyllum cuneiforme</i> , Conrad= <i>Flabellum cuneiforme</i> (Con.), Lonsdale.....                           | 33    |
| <i>Turbonillia machurii</i> , Lea= <i>Endopachys machurii</i> (Lea), Conrad.....                                     | 33    |
| <i>Scutella lyelli</i> , Conrad= <i>Mortonia</i> ( <i>Periarthus</i> ) <i>lyelli</i> , Conrad.....                   | 33    |
| <i>Orbitolites interstitia</i> (Lea), <i>Lunulites</i> Gabb & Horn= <i>Lunulites interstitia</i> , Lea .....         | 33    |
| <i>Lunulites bouei</i> , Lea= <i>Discofustrellaria bouei</i> (Lea), Gabb & Horn.....                                 | 33    |
| <i>Orbitolites discoidea</i> Lea= <i>Capularia discoidea</i> (Lea), Gabb & Horn .....                                | 33    |
| <i>Lunulites duclosii</i> , Lea= <i>Heteractis duclosii</i> (Lea), Gabb & Horn .....                                 | 33    |
| <i>Terebratula wilmingtensis</i> , Lyell & Sowerby= <i>Rhynchonella wilmingtensis</i> (Lyell & Sowerby), Conrad..... | 33    |
| <i>Ostrea eversa</i> , Deshayes= <i>Gryphostrea eversa</i> (Deshayes), Conrad.....                                   | 33    |
| <i>Pecten calvatus</i> , Morton= <i>Camptonectes calvatus</i> (Morton), Conrad.....                                  | 33    |
| <i>Leda compsa</i> , Gabb= <i>Nuculana compsa</i> (Gabb), Conrad.....                                                | 33    |
| <i>Nucula cultelliformis</i> , Rogers= <i>Nuculana cultelliformis</i> (Rogers), Conrad.....                          | 33    |
| <i>Nucula magna</i> , Lea= <i>Nuculana magna</i> (Lea), Conrad .....                                                 | 33    |
| <i>Nucula media</i> , Lea= <i>Nuculana media</i> (Lea), Conrad .....                                                 | 33    |
| <i>Leda Oregona</i> , Shumard= <i>Nuculana Oregona</i> (Shumard), Conrad.....                                        | 33    |
| <i>Nucula ovula</i> , Lea= <i>Nuculana ovula</i> (Lea), Conrad .....                                                 | 33    |
| <i>Nucula parva</i> , Rogers= <i>Nuculana parva</i> (Rogers), Conrad.....                                            | 33    |
| <i>Nucula plana</i> , Lea= <i>Nuculana plana</i> (Lea), Conrad .....                                                 | 33    |
| <i>Nucula plicata</i> , Lea= <i>Nuculana plicata</i> (Lea), Conrad.....                                              | 33    |
| <i>Nucula pulcherrima</i> , Lea= <i>Nuculana pulcherrima</i> (Lea), Conrad.....                                      | 33    |
| <i>Nucula semen</i> , Lea= <i>Nuculana semen</i> . (Lea) Conrad .....                                                | 33    |
| <i>Cucullea ononcheila</i> , Rogers= <i>Latiarca ononcheila</i> , (Rogers) Conrad.....                               | 33    |
| <i>Cucullea transversa</i> , Rogers= <i>Latiarca transversa</i> , (Rogers) Conrad.....                               | 33    |
| <i>Arca rhomboidella</i> , Lea= <i>Anomolocardia rhomboidella</i> , (Lea) Conrad.....                                | 33    |
| <i>Pectunculus ellipsis</i> , Lea= <i>Limopsis ellipsis</i> , (Lea) Conrad .....                                     | 33    |
| <i>Nucula pectuncularis</i> , Lea= <i>Limopsis pectuncularis</i> , (Lea) Conrad.....                                 | 33    |
| <i>Crenella concentrica</i> , Gabb= <i>Staligmium concentricum</i> , (Gabb) Conrad.....                              | 33    |
| <i>Astarte minutissima</i> , Lea= <i>Micromeris minutissima</i> , (Lea) Conrad.....                                  | 34    |
| <i>Astarte parva</i> , Lea= <i>Micromeris parva</i> , (Lea) Conrad.....                                              | 34    |
| <i>Egeria inflata</i> , Lea= <i>Sphaerella inflata</i> , (Lea) Conrad.....                                           | 34    |
| <i>Dosinia gyrata</i> , Gabb= <i>Lucina gyrata</i> , (Gabb) Conrad .....                                             | 34    |
| <i>Corbis lamellosa</i> , Conrad (not Lam.)= <i>Gafrarium liratum</i> , Conrad.....                                  | 34    |
| <i>Cytherea lenticularis</i> , Rogers= <i>Dosiniopsis lenticularis</i> , (Rogers) Conrad.....                        | 34    |
| <i>Venus floridana</i> , Conrad= <i>Cryptogramma floridana</i> , Conrad .....                                        | 34    |
| <i>Venus penita</i> , Conrad= <i>Cryptogramma ? penita</i> , Conrad.....                                             | 34    |
| ? <i>Cytherea ovata</i> , Rogers= <i>Dione ovata</i> , (Rogers) Conrad .....                                         | 34    |
| <i>Egeria plana</i> , Lea= <i>Tellina plana</i> , (Lea) Conrad.....                                                  | 34    |
| <i>Anatina claibornensis</i> , Lea= <i>Periploma claibornensis</i> , (Lea) Conrad .....                              | 34    |
| <i>Solen diegoensis</i> , Gabb= <i>Plectosolen ? diegoensis</i> , (Gabb) Conrad.....                                 | 34    |
| <i>Solen parallelus</i> , Gabb= <i>Plectosolen parallelus</i> , (Gabb) Conrad.....                                   | 34    |
| <i>Bulla dekayi</i> , Lea= <i>Cylichna dekayi</i> , (Lea) Conrad.....                                                | 34    |
| <i>Actæon impressa</i> , Gabb= <i>Tornatellæa impressa</i> , (Gabb) Conrad.....                                      | 34    |
| <i>Pasithea striata</i> , Lea= <i>Actæonema striata</i> , (Lea) Conrad.....                                          | 34    |
| <i>Pasithea sulcata</i> , Lea= <i>Actæonema sulcata</i> , (Lea) Conrad.....                                          | 34    |

|                                                                                                               | Page. |
|---------------------------------------------------------------------------------------------------------------|-------|
| <i>Marginella biphicata</i> , Lea= <i>Ringicula biphicata</i> , (Lea) Conrad.....                             | 34    |
| <i>Melinia nitidula</i> , Meek= <i>Linnea nitidula</i> , Meek.....                                            | 34    |
| <i>Linnea tenuicostata</i> , M. & H.= <i>Linnea</i> ( <i>Pleurolimnea</i> ) <i>tenuicostata</i> , M. & H..... | 34    |
| <i>Bulimus linnaeiiformis</i> , M. & H.= <i>Spiraxis haydeni</i> , Meek.....                                  | 34    |
| <i>Helix spatiosa</i> , Meek= <i>Macrocyclus spatiosa</i> , (M. & H.) Meek.....                               | 34    |
| <i>Bulimus perversus</i> , M. & H.= <i>Clausilia contraria</i> , (M. & H.) Meek.....                          | 34    |
| <i>Bulimus teres</i> , M. & H.= <i>Clausilia teres</i> , (M. & H.) Meek.....                                  | 34    |
| <i>Bulimus vermiculus</i> , M. & H.= <i>Clausilia vermicula</i> , (M. & H.) Meek.....                         | 34    |
| <i>Dentalium</i> ( <i>Ditrupa</i> ?) <i>pusillum</i> , Gabb= <i>Gadus pusillus</i> , (Gabb) Conrad.....       | 34    |
| <i>Ditrupa subcoarctata</i> , Gabb= <i>Gadus subcoarctatus</i> , (Gabb) Conrad.....                           | 34    |
| <i>Rotella nana</i> , Lea= <i>Umbonium nana</i> , (Lea) Conrad.....                                           | 34    |
| <i>Natica diegoana</i> , Conrad= <i>Vanikoro diegoana</i> , (Conrad) Meek.....                                | 34    |
| <i>Hipponyx pygmaea</i> , Lea= <i>Concholepas pygmaea</i> , (Lea) Conrad.....                                 | 34    |
| <i>Calyptrea trochiformis</i> , Lea= <i>Trochita trochiformis</i> , (Lea) Conrad.....                         | 34    |
| <i>Galerus excentricus</i> , Gabb= <i>Galeropsis excentricus</i> , (Gabb) Conrad.....                         | 34    |
| <i>Turritella striata</i> , Lea= <i>Mesalia striata</i> , (Lea) Conrad.....                                   | 34    |
| <i>Melania</i> ? <i>multistriata</i> , M. & H.= <i>Campeloma multistriata</i> , (M. & H.) Meek.....           | 34    |
| <i>Paludina multilineata</i> , M. & H.= <i>Campeloma multilineatum</i> , (M. & H.) Meek.....                  | 35    |
| <i>Paludina retula</i> , M. & H.= <i>Campeloma vetulum</i> , (M. & H.) Meek.....                              | 35    |
| <i>Melania anthonii</i> , M. & H.= <i>Hydrobia anthonii</i> , M. & H.....                                     | 35    |
| <i>Melania minutula</i> , M. & H.= <i>Micropurgus minutulus</i> , M. & H.....                                 | 35    |
| <i>Natica alabamensis</i> , Whitfield= <i>Lacunaria alabamensis</i> , (Whitfield) Conrad.....                 | 35    |
| <i>Natica erecta</i> , Whitfield= <i>Lacunaria erecta</i> , (Whitfield) Conrad.....                           | 35    |
| <i>Melania humerosa</i> , M. & H.= <i>Tiara humerosa</i> , Meek.....                                          | 35    |
| <i>Cerithium nodulosum</i> , Hall= <i>Goniobasis</i> ? <i>nodulosa</i> , (Hall) Meek.....                     | 35    |
| <i>Melania arcta</i> , M. & H.= <i>Goniobasis</i> ? <i>arcta</i> , Meek.....                                  | 35    |
| <i>Cerithium fremontii</i> , Hall= <i>Goniobasis</i> ? <i>fremontii</i> , (Hall) Meek.....                    | 35    |
| <i>Melania simpsoni</i> , Meek= <i>Goniobasis</i> ? <i>simpsoni</i> , Meek.....                               | 35    |
| <i>Melania sublaevis</i> , M. & H.= <i>Goniobasis</i> ? <i>sublaevis</i> , (M. & H.) Meek.....                | 35    |
| <i>Melania subtortuosa</i> , M. & H.= <i>Goniobasis</i> ? <i>subtortuosa</i> , (M. & H.) Meek.....            | 35    |
| <i>Melania tenuicarinata</i> , M. & H.= <i>Goniobasis</i> ? <i>tenuicarinata</i> , (M. & H.) Meek.....        | 35    |
| <i>Cerithium tenerum</i> , Hall= <i>Goniobasis</i> ? <i>tenera</i> , (Hall) Meek.....                         | 35    |
| <i>Solarium henrici</i> , Lea= <i>Architectonica henrici</i> , (Lea) Conrad.....                              | 35    |
| <i>Solarium ornatum</i> , Lea= <i>Architectonica ornata</i> , (Lea) Conrad.....                               | 35    |
| <i>Delphinula plana</i> , Lea= <i>Architectonica plana</i> , (Lea) Conrad.....                                | 35    |
| <i>Solarium pseudogranulatum</i> , d'Orbigny= <i>Architectonica pseudogranulata</i> , (d'Orbigny) Conrad..... | 35    |
| <i>Delphinula depressa</i> , Lea= <i>Solariorbis depressus</i> , (Lea) Conrad.....                            | 35    |
| <i>Turbo lineatus</i> , Lea= <i>Solariorbis lineatus</i> , (Lea) Conrad.....                                  | 35    |
| <i>Planaria nitens</i> , Lea= <i>Solariorbis nitens</i> , (Lea) Conrad.....                                   | 35    |
| <i>Pasithea aciculata</i> , Lea= <i>Eulima aciculata</i> , (Lea) Conrad.....                                  | 35    |
| <i>Pasithea lugubris</i> , Lea= <i>Eulima lugubris</i> , (Lea) Conrad.....                                    | 35    |
| <i>Pasithea notata</i> , Lea= <i>Eulima notata</i> , (Lea) Conrad.....                                        | 35    |
| <i>Pasithea scale</i> , Lea= <i>Eulima scale</i> , (Lea) Conrad.....                                          | 35    |
| <i>Acteon melanellus</i> , Lea= <i>Obeliscus melanellus</i> , (Lea) Conrad.....                               | 35    |
| <i>Acteon pygmaeus</i> , Lea= <i>Obeliscus pygmaeus</i> , (Lea) Conrad.....                                   | 35    |
| <i>Acteon striatus</i> , Lea= <i>Obeliscus striatus</i> , (Lea) Conrad.....                                   | 35    |
| <i>Mitra costata</i> , Lea= <i>Pyramimitra costata</i> , (Lea) Conrad.....                                    | 35    |
| <i>Natica minima</i> , Lea= <i>Lunatia minima</i> , (Lea) Conrad.....                                         | 35    |
| <i>Natica alveata</i> , Conrad= <i>Ampullina alveata</i> , Conrad.....                                        | 35    |
| <i>Natica gibbosa</i> , Lea= <i>Neverita gibbosa</i> , (Lea) Conrad.....                                      | 35    |
| <i>Naticina obliqua</i> , Gabb= <i>Catinus obliquus</i> , (Gabb) Conrad.....                                  | 35    |
| <i>Sycoctypus penitus</i> , Conrad= <i>Ficopsis penitus</i> , Conrad.....                                     | 35    |
| <i>Buccinum sowerbii</i> , Lea= <i>Semicassis sowerbii</i> , (Lea) Conrad.....                                | 35    |
| <i>Fusus remondii</i> , Gabb= <i>Ficopsis remondii</i> , (Gabb) Conrad.....                                   | 36    |
| <i>Fusus cooperi</i> , Gabb= <i>Ficopsis cooperi</i> , (Gabb) Conrad.....                                     | 36    |
| <i>Ficus mammillatus</i> , Gabb= <i>Ficopsis mammillatus</i> , (Gabb) Conrad.....                             | 36    |
| <i>Hemifusus hornii</i> , Gabb= <i>Priscoficus hornii</i> , (Gabb) Conrad.....                                | 36    |
| <i>Mitra flemingii</i> , Lea= <i>Caricella flemingii</i> , (Lea) Conrad.....                                  | 36    |
| <i>Mitra fusoides</i> , Lea= <i>Conomitra fusoides</i> , (Lea) Conrad.....                                    | 36    |
| <i>Mitra mooreana</i> , Gabb= <i>Lapparia mooreana</i> , (Gabb) Conrad.....                                   | 36    |
| <i>Mitra lineata</i> , Lea= <i>Fusimitra</i> ? <i>lineata</i> , (Lea) Conrad.....                             | 36    |
| <i>Mitra minima</i> , Lea= <i>Fusimitra</i> ? <i>minima</i> , (Lea) Conrad.....                               | 36    |
| <i>Fasciolaria moorei</i> , Gabb= <i>Cordieria moorei</i> , (Gabb) Conrad.....                                | 36    |
| <i>Fasciolaria plicata</i> , Lea= <i>Latirus</i> ( <i>Peristernia</i> ) <i>plicatus</i> , (Lea) Conrad.....   | 36    |

|                                                                                                               | Page. |
|---------------------------------------------------------------------------------------------------------------|-------|
| <i>Ancillaria elongata</i> , Gabb = <i>Lamprodoma elongata</i> , (Gabb) Conrad.....                           | 36    |
| <i>Oliva gracilis</i> , Lea = <i>Lamprodoma gracilis</i> , (Lea) Conrad.....                                  | 36    |
| <i>Olivia phillipsii</i> , Lea = <i>Lamprodoma phillipsii</i> , (Lea) Conrad.....                             | 36    |
| <i>Anolax gigantea</i> , Lea = <i>Ancillopsis altile</i> , Conrad.....                                        | 36    |
| <i>Anolax plicata</i> , Lea = <i>Olivula? plicata</i> , (Lea) Conrad.....                                     | 36    |
| <i>Agaronia punctulifera</i> , Gabb = <i>Olivula punctulifera</i> , (Gabb) Conrad.....                        | 36    |
| <i>Fusus taiitii</i> , Lea = <i>Cornulina armigera</i> , Conrad.....                                          | 36    |
| <i>Monoceras sulcatum</i> , Lea = <i>Pseudoliva sulcata</i> , (Lea) Conrad.....                               | 36    |
| <i>Tritonium diegoensis</i> , Gabb = <i>Buccinofusus diegoensis</i> , (Gabb) Conrad.....                      | 36    |
| <i>Pleurotoma beaumontii</i> , Lea = <i>Surcula beaumontii</i> , (Lea) Conrad.....                            | 36    |
| <i>Pleurotoma celata</i> , Lea = <i>Surcula celata</i> , (Lea) Conrad.....                                    | 36    |
| <i>Pleurotoma childreni</i> , Lea = <i>Surcula childreni</i> , (Lea) Conrad.....                              | 36    |
| <i>Pleurotoma desnoyersii</i> , Lea = <i>Surcula desnoyersii</i> , (Lea) Conrad.....                          | 36    |
| <i>Pleurotoma kellogii</i> , Gabb = <i>Surcula kellogii</i> , (Gabb) Conrad.....                              | 36    |
| <i>Pleurotoma monilifera</i> , Lea = <i>Surcula monilifera</i> , (Lea) Conrad.....                            | 36    |
| <i>Pleurotoma nodocarinata</i> , Gabb = <i>Surcula nodocarinata</i> , (Gabb) Conrad.....                      | 36    |
| <i>Pleurotoma obliqua</i> , Lea = <i>Surcula obliqua</i> , (Lea) Conrad.....                                  | 36    |
| <i>Pleurotoma rugosa</i> , Lea = <i>Surcula rugosa</i> , (Lea) Conrad.....                                    | 36    |
| <i>Pleurotoma sayi</i> , Lea = <i>Surcula sayi</i> , (Lea) Conrad.....                                        | 36    |
| <i>Pleurotoma varicostata</i> , Gabb = <i>Surcula varicostata</i> , (Gabb) Conrad.....                        | 36    |
| <i>Pleurotoma lonsdalii</i> , Lea = <i>Drillia lonsdalii</i> , (Lea) Conrad.....                              | 36    |
| <i>Pleurotoma texana</i> , Gabb = <i>Drillia texana</i> , (Gabb) Conrad.....                                  | 36    |
| <i>Papillina attilis</i> , Conrad = <i>Clavifusus altile</i> , Conrad.....                                    | 36    |
| <i>Fusus cooperi</i> , Conrad = <i>Olavifusus cooperi</i> , Conrad.....                                       | 36    |
| <i>Fusus conybearii</i> , Lea = <i>Strepsidura conybearii</i> , (Lea) Conrad.....                             | 36    |
| <i>Pelagus vanuxemi</i> , Conrad = <i>Aturia vanuxemi</i> , Conrad.....                                       | 36    |
| <i>Nautilus lamarkii</i> , Deshayes = <i>Cymomia lamarkii</i> , (Deshayes) Conrad.....                        | 37    |
| <i>Olavella Vicksburgensis</i> , Conrad = <i>Piestoecheilus Vicksburgensis</i> , (Con.) Meek.....             | 37    |
| <i>Nummulites mantelli</i> , Morton = <i>Orbitolites (Orbitoides) mantelli</i> , Morton.....                  | 37    |
| <i>Scutella crustuloides</i> , Morton = <i>Mortonia (Periarchus) crustuloides</i> , (Mort.) Conrad.....       | 37    |
| <i>Scutella pileus-sinensis</i> , Ravenel = <i>Mortonia (Periarchus) pileus-sinensis</i> , (Rav.) Conrad..... | 37    |
| <i>Echinus infulatus</i> , Morton = <i>Caelopleurus inflatus</i> , (Morton) Desor.....                        | 37    |
| <i>Scutella jonesii</i> , Forbes = <i>Clypeaster jonesii</i> , (Forbes) Desor.....                            | 37    |
| <i>Scutella rogersi</i> , Morton = <i>Clypeaster rogersi</i> , (Morton) Conrad.....                           | 37    |
| <i>Mortonia tumida</i> , Conrad = <i>Clypeaster tumidus</i> , Conrad.....                                     | 37    |
| <i>Pyrgorhynchus mortonis</i> , Mich. = <i>Echinianthus mortonis</i> , (Mich.) Desor.....                     | 37    |
| <i>Catopygus patelleformis</i> , Bouvé = <i>Cassidulus patelliformis</i> , (Bouvé) Desor.....                 | 37    |
| <i>Cellepora tubulata</i> , Lonsdale = <i>Eschara tubulata</i> , (Lonsd.) Gabb & Horn.....                    | 37    |
| <i>Terebratula lachryma</i> , Morton = <i>Terebratulina lachryma</i> , (Mort.) Conrad.....                    | 37    |
| <i>Plagiostoma dumosa</i> , Morton = <i>Spondylus dumosus</i> , (Morton) Conrad.....                          | 37    |
| <i>Umbrella planulata</i> , Conrad = <i>Operculatum planulatum</i> , Conrad.....                              | 37    |
| <i>Doliopsis</i> , n. g., Conrad = <i>Galeodea (Galeodaria) quinquecostata</i> , Conrad.....                  | 37    |

## 12.

CONRAD, T. A. [Description of a new genus and subgenus.] <Rep. U. S. Geol. and Geogr. Surv. Terr., F. V. Hayden, vol. ii. The vertebrata of the Cretaceous formations of the West by E. D. Cope, pp. 23-24. Washington, 1875.

|                                                               | Page  |
|---------------------------------------------------------------|-------|
| <i>Haploscapha</i> , n. g., Conrad, 1875.....                 | 23    |
| <i>H. grandis</i> , n. s., Conrad, 1875.....                  | 23-24 |
| <i>Cucullifera</i> , n. s. g., Conrad, 1875.....              | 24    |
| <i>H. (Cucullifera) eccentrica</i> , n. s., Conrad, 1875..... | 24    |



### III.—THE WRITINGS OF JAMES DWIGHT DANA.

#### 1.

DANA, J. D. Zoophytes. <U. S. Expl. Exp. during the years 1838-1842 under the command of Charles Wilkes, U. S. N., vol. vii, pp. 1-741, Atlas pls. i-lxi. Philadelphia, 1846.

Many fossil genera are mentioned and discussed in this work.

#### 2.

DANA, J. D. Genera of Fossil Corals of the family Cyathophyllidæ. <Amer. Journ. Sci., 2d ser., vol. i, pp. 178-189, figs. 1-5. New Haven, 1846.

This article is extracted from the report of the United States Exploring Expedition during the years 1838-'42, under the command of Charles Wilkes, U. S. N. Zoophytes, by James D. Dana, Geologist of the Expedition, pp. 1-741. 4to. See entry No. 1.

|                                                                      | Page.   |
|----------------------------------------------------------------------|---------|
| Family <i>Cyathophyllidæ</i> .....                                   | 179-182 |
| <i>Cyathophyllum</i> .....                                           | 182-183 |
| <i>Calophyllum</i> , n. g., Dana, 1846 .....                         | 183-184 |
| <i>Amplexus</i> , Sowerby.....                                       | 184     |
| <i>Caninia</i> , Michelin .....                                      | 184     |
| <i>Acervularia</i> , Schweigger.....                                 | 184-186 |
| <i>Arachnophyllum</i> , n. g., Dana, 1846, fig. 1, p. 186 .....      | 186     |
| <i>Cystiophyllum</i> , Lonsdale .....                                | 186     |
| <i>Clisiophyllum</i> , n. g., Dana, 1846, figs. 2 and 3, p. 187..... | 187     |
| <i>Michelinia</i> , Koninek .....                                    | 187     |
| <i>Columnaria</i> , Goldfuss, fig. 4, p. 188.....                    | 188     |
| <i>Sarcinula</i> , Lamarck .....                                     | 188-189 |

#### 3.

DANA, J. D. Description of Fossil Shells of the collections of the Exploring Expedition under the command of Charles Wilkes, U. S. N., obtained in Australia, from the lower layers of the coal formation in Illawara, and from a deposit probably of nearly the same age at Harper's Hill, valley of the Hunter. <Amer. Journ. Sci., 2d ser., vol. iv. Appendix, pp. 151-160. New Haven, 1847.

|                                                                  | Page.   |
|------------------------------------------------------------------|---------|
| <i>Bellerophon undulatus</i> , n. s., Dana, 1847 .....           | 151     |
| <i>Bellerophon strictus</i> , n. s., Dana, 1847 .....            | 151     |
| <i>Platyschisma</i> ? <i>depressum</i> , n. s., Dana, 1847 ..... | 151     |
| <i>Pleurotomaria tri-filata</i> , n. s., Dana, 1847.....         | 151     |
| <i>Pleurotomaria nuda</i> , n. s., Dana, 1847 .....              | 151     |
| <i>Natica</i> ——— ? Dana, 1847 .....                             | 151     |
| <i>Patella tenella</i> , n. s., Dana, 1847 .....                 | 151-152 |
| <i>Pentadia</i> , n. g., Dana, 1847 .....                        | 152     |
| <i>P. spatangus</i> , n. s., Dana, 1847 .....                    | 152     |
| <i>P. reniformis</i> , n. s., Dana, 1847 .....                   | 152     |
| <i>P. trigonia</i> , n. s., Dana, 1847 .....                     | 152     |
| <i>Lingula orata</i> , n. s., Dana, 1847 .....                   | 152     |
| <i>Terebratula amygdala</i> , n. s., Dana, 1847.....             | 152     |
| <i>Terebratula elongata</i> , n. s., Dana, 1847 .....            | 152     |
| <i>Productus fragilis</i> , n. s., Dana, 1847 .....              | 153     |
| <i>Solen (Solecurtus ?) ellipticus</i> , n. s., Dana, 1847 ..... | 153     |
| <i>Solen (Solecurtus ?) planulatus</i> , n. s., Dana, 1847 ..... | 153     |
| <i>Pholadomya undata</i> , n. s., Dana, 1847 .....               | 153     |
| <i>Allorisma audax</i> , n. s., Dana, 1847 .....                 | 153     |
| <i>Oleobis</i> , n. g., Dana, 1847.....                          | 154     |
| <i>C. grandis</i> , n. s., Dana, 1847 .....                      | 154     |



|                                                         | Page.   |
|---------------------------------------------------------|---------|
| <i>C. gracilis</i> , n. s., Dana, 1847 .....            | 159     |
| <i>C. ? recta</i> , n. s., Dana, 1847 .....             | 154     |
| <i>Astarte gemma</i> , n. s., Dana, 1847 .....          | 154-155 |
| <i>Astartila</i> , n. g., Dana, 1847 .....              | 155     |
| <i>A. intrepida</i> , n. s., Dana, 1847 .....           | 155     |
| <i>A. cyprina</i> , n. s., Dana, 1847 .....             | 155     |
| <i>A. cythera</i> , n. s., Dana, 1847 .....             | 155     |
| <i>A. polita</i> , n. s., Dana, 1847 .....              | 155     |
| <i>A. cyclas</i> , n. s., Dana, 1847 .....              | 155     |
| <i>A. transversa</i> , n. s., Dana, 1847 .....          | 155-156 |
| <i>Cardinia</i> , Agassiz .....                         | 156     |
| <i>C. recta</i> , n. s., Dana, 1847 .....               | 156     |
| <i>C. cuneata</i> , n. s., Dana, 1847 .....             | 156     |
| <i>Pyramus</i> , n. g., Dana, 1847 .....                | 156-157 |
| <i>P. ellipticus</i> , n. s., Dana, 1847 .....          | 157     |
| <i>P. myiformis</i> , n. s., Dana, 1847 .....           | 157     |
| <i>Nucula abrupta</i> , n. s., Dana, 1847 .....         | 157     |
| <i>Nucula</i> — ? Dana, 1847 .....                      | 157     |
| <i>Cypricardia rugulosa</i> , n. s., Dana, 1847 .....   | 157     |
| <i>Cypricardia sinuosa</i> , n. s., Dana, 1847 .....    | 157-158 |
| <i>Myonia</i> , n. g., Dana, 1847 .....                 | 158     |
| <i>M. elongata</i> , n. s., Dana, 1847 .....            | 158     |
| <i>M. valida</i> , n. s., Dana, 1847 .....              | 158     |
| <i>Eurydesma elliptica</i> , n. s., Dana, 1847 .....    | 158     |
| <i>Eurydesma globosa</i> , n. s., Dana, 1847 .....      | 158     |
| <i>Modiolopsis simplex</i> , n. s., Dana, 1847 .....    | 158     |
| <i>Modiolopsis siliqua</i> , n. s., Dana, 1847 .....    | 159     |
| <i>Modiolopsis prærupta</i> , n. s., Dana, 1847 .....   | 159     |
| <i>Modiolopsis imbricata</i> , n. s., Dana, 1847 .....  | 159     |
| <i>Modiolopsis arcodes</i> , n. s., Dana, 1847 .....    | 159     |
| <i>Modiolopsis acutifrons</i> , n. s., Dana, 1847 ..... | 159-160 |
| <i>Avicula</i> — ? Dana, 1847 .....                     | 160     |
| <i>Pecten comptus</i> , n. s., Dana, 1847 .....         | 160     |
| <i>Pecten tenuicollis</i> , n. s., Dana, 1847 .....     | 160     |
| <i>Pecten tenuisculus</i> , n. s., Dana, 1847 .....     | 160     |

## 4.

DANA, J. D. Fossils of the Exploring Expedition under the command of Charles Wilkes, U. S. N., a fossil fish from Australia, and a Belemnite from Terra Del Fuego. <Am. Journ. Sci., vol. v, 2d ser., pp. 433-435. New Haven, 1848.

|                                                                                       | Page.   |
|---------------------------------------------------------------------------------------|---------|
| <i>Urosthene</i> s, n. g., Dana, 1848 .....                                           | 433-434 |
| <i>U. australis</i> , n. s., Dana, 1848 .....                                         | 434     |
| <i>Helicurus</i> , n. g., Dana, 1848 .....                                            | 434     |
| <i>H. fuegiensis</i> , n. s., Dana, 1848 .....                                        | 434     |
| <i>Cardinia</i> ? <i>exilis</i> , McCoy = <i>Cardinia recta</i> , Dana .....          | 434     |
| <i>Pleurotomaria morrisiana</i> , McCoy = <i>Pleurotomaria trifidata</i> , Dana ..... | 434     |
| <i>Pachydomus ovalis</i> , McCoy .....                                                | 434     |
| <i>Pachydomus pusillus</i> , McCoy .....                                              | 434     |
| <i>Pachydomus succentus</i> , McCoy .....                                             | 434     |
| <i>Eurydesma cordata</i> ? Morris .....                                               | 434     |
| <i>Notomya</i> , McCoy = <i>Pyramus</i> , Dana .....                                  | 434     |

## 5.

DANA, J. D. Descriptions of fossils. <U. S. Expl. Exp., 1838-42, under the command of Charles Wilkes, U. S. N. Geology. By James D. Dana. Vol. x, Appendix, pp. 681-729, *pars*. Atlas, xxi, pls. *pars*. Philadelphia, 1849.

## APPENDIX I.

## FOSSILS OF NEW SOUTH WALES.

|                                                        | Page.   |
|--------------------------------------------------------|---------|
| <i>Pisces</i> .....                                    | 681     |
| <i>Urosthene</i> s, Dana, 1848 .....                   | 681     |
| <i>Urosthene</i> s <i>australis</i> , Dana, 1848 ..... | 681-682 |

|                                                                                                               | Page-   |
|---------------------------------------------------------------------------------------------------------------|---------|
| <i>Mollusca</i> .....                                                                                         | 682     |
| <i>Irr. inopoda</i> .....                                                                                     | 682     |
| <i>Terebratula amygdala</i> , Dana, 1847 .....                                                                | 682     |
| <i>Terebratula elongata</i> , Dana, 1847, pl. i, figs. 3 <i>a, b</i> .....                                    | 682-683 |
| <i>Terebratula</i> ———, Dana, 1849, pl. i, figs. 4 <i>a, b</i> .....                                          | 683     |
| <i>Terebratula</i> ? ———, Dana, 1849, pl. i, fig. 5 .....                                                     | 683     |
| <i>Spirifer glaber</i> , pl. i, fig. 6 <i>a, b</i> .....                                                      | 683     |
| <i>Spirifer darwini</i> (J. Morris), pl. i, fig. 7 <i>a</i> .....                                             | 684     |
| <i>Spirifer duodecostatus</i> (McCoy), pl. ii, figs. 1 <i>a, b</i> .....                                      | 684     |
| <i>Spirifer</i> ———, Dana, 1849, pl. ii, fig. 2 .....                                                         | 684     |
| <i>Spirifer respertilia</i> (G. Sowerby), pl. ii, figs. 3 <i>a-c</i> .....                                    | 685     |
| <i>Spirifer phalanna</i> , n. s., Dana, 1849, pl. ii, fig. 4 .....                                            | 685     |
| <i>Siphonotreta</i> ? <i>curta</i> , n. s., Dana, 1849, pl. ii, figs. 5 <i>a, b</i> .....                     | 685     |
| <i>Lingula ovata</i> , n. s., Dana, 1849, pl. ii, figs. 6 <i>a, b</i> .....                                   | 685-686 |
| <i>Productus fragilis</i> , Dana, pl. vii, figs. 7 <i>a-c</i> .....                                           | 686     |
| <i>Productus brachytherus</i> (G. Sowerby), pl. ii, fig. 8 .....                                              | 686     |
| <i>Acphoria</i> .....                                                                                         | 686     |
| <i>Solecuretus</i> ? <i>ellipticus</i> , Dana, pl. ii, fig. 9 .....                                           | 686     |
| <i>Solecuretus</i> ( <i>Psammobia</i> ?) <i>planulatus</i> , Dana, pl. ii, fig. 10 .....                      | 686-687 |
| <i>Pholadomya</i> ( <i>Polytomya</i> ) <i>undata</i> , Dana, pl. ii, figs. 11 <i>a, b</i> .....               | 687     |
| <i>Pholadomya</i> ( <i>Homomya</i> ) <i>glendonensis</i> , n. s., Dana, 1849, pl. ii, fig. 12 .....           | 687     |
| <i>Pholadomya</i> ( <i>Homomya</i> ) <i>audax</i> , Dana, pl. iii, figs. 1 <i>a-c</i> .....                   | 687     |
| <i>Pholadomya</i> ( <i>Homomya</i> ) <i>currata</i> [?] (J. Morris), Dana, pl. iii, figs. 2 <i>a, b</i> ..... | 687     |
| <i>Astarte gemma</i> , Dana, pl. iii, figs. 4 <i>a, b</i> .....                                               | 688     |
| <i>Astarte</i> , Dana, 1847 .....                                                                             | 688     |
| <i>A. intrepida</i> , Dana, 1847, pl. iii, figs. 5, 5 <i>a</i> .....                                          | 689     |
| <i>A. cuneata</i> , Dana, 1847, pl. iii, figs. 6, 6 <i>a</i> .....                                            | 689     |
| <i>A. euchaeta</i> , Dana, 1847, pl. iv, figs. 1, 1 <i>a</i> .....                                            | 689     |
| <i>A. polita</i> , Dana, 1847, pl. iv, figs. 2 <i>a-c</i> .....                                               | 690     |
| <i>A. cincta</i> , Dana, 1847, pl. iv, figs. 3, 3 <i>a</i> .....                                              | 690     |
| <i>A. transversa</i> , Dana, 1847, pl. iv, figs. 4 <i>a, b</i> .....                                          | 690     |
| <i>A. ? corpulenta</i> , n. s., Dana, 1849, pl. iii, figs. 3 <i>a-c</i> .....                                 | 691     |
| <i>Cardinia recta</i> , Dana, pl. iv, figs. 5 <i>a, b</i> .....                                               | 691     |
| <i>Cardinia</i> ? <i>cuneata</i> , Dana, pl. iv, figs. 6, 6 <i>a-c</i> .....                                  | 692     |
| <i>Cardinia</i> ? <i>costata</i> (J. Morris), Dana, pl. iv, figs. 8 <i>a-c</i> .....                          | 692     |
| <i>Pachylonax</i> .....                                                                                       | 692-693 |
| <i>P. cuneatus</i> (J. D. Sowerby), Morris, pl. v, figs. 1, 1 <i>a</i> .....                                  | 693     |
| <i>P. antiquatus</i> , (J. D. Sowerby), Morris, pl. v, fig. 2 .....                                           | 693-694 |
| <i>P. levis</i> (J. D. Sowerby), Morris .....                                                                 | 694     |
| <i>Maconia</i> , Dana .....                                                                                   | 694     |
| <i>Maconia</i> , Dana .....                                                                                   | 694     |
| <i>Paramia</i> , Dana .....                                                                                   | 695     |
| <i>Cleobis</i> , Dana .....                                                                                   | 695     |
| <i>Maconia elongata</i> , Dana, 1847, pl. v, figs. 3 <i>a-c</i> .....                                         | 695     |
| <i>M. valida</i> , Dana, 1847, pl. v, figs. 4 <i>a-b</i> .....                                                | 695     |
| <i>M. axinia</i> , Dana, 1847, pl. v, figs. 5 <i>a, b</i> .....                                               | 696     |
| <i>M. ? carinata</i> (J. Morris), Dana, pl. vi, figs. 1 <i>a, b</i> .....                                     | 696     |
| <i>M. fragilis</i> , n. s., Dana, 1849, pl. vi, figs. 2, 3 .....                                              | 696-697 |
| <i>M. miterensis</i> , Dana, 1847, pl. vi, fig. 4 <i>a</i> .....                                              | 697     |
| ? <i>M. elliptica</i> , Dana, 1849, pl. vi, fig. 5 <i>a, c</i> .....                                          | 697     |
| <i>M. gigas</i> (McCoy), Dana .....                                                                           | 697     |
| <i>M. grandis</i> , Dana, 1847, pl. vi, fig. 7 .....                                                          | 697-698 |
| <i>M. gracilis</i> , Dana, 1847, pl. vii, figs. 1 <i>a, c</i> .....                                           | 698     |
| <i>M. ? recta</i> , Dana, 1847, pl. vii, fig. 2 .....                                                         | 698     |
| <i>Nucula abrupta</i> , Dana, 1847, pl. vii, fig. 3 .....                                                     | 698     |
| <i>Nucula concinna</i> , n. s., Dana, 1849, pl. vii, fig. 4 .....                                             | 699     |
| <i>Nucula glendonensis</i> , n. s., Dana, 1849, pl. vii, fig. 5 .....                                         | 699     |
| <i>Eucyrtus</i> , Morris .....                                                                                | 699     |
| <i>E. elliptica</i> , Dana, 1847, pl. vii, figs. 6 <i>a-d</i> .....                                           | 700     |
| <i>E. globosa</i> , Dana, 1847, pl. vii, figs. 7, 7 <i>a</i> .....                                            | 700     |
| <i>E. sacculus</i> (McCoy), Dana, pl. vii, figs. 8 <i>a, b</i> .....                                          | 700     |
| <i>E. cordata</i> (Morris) .....                                                                              | 700-701 |
| <i>Cardium australe</i> (McCoy), Dana, pl. viii, fig. 2 .....                                                 | 701     |
| <i>Cardium ferac</i> , n. s., Dana, 1849, pl. viii, fig. 3 .....                                              | 701     |
| <i>Cypriocardia</i> .....                                                                                     | 701-702 |

|                                                                                                                | Page    |
|----------------------------------------------------------------------------------------------------------------|---------|
| <i>C. acutifrons</i> , Dana, 1847, pl. viii, figs. 4 <i>a</i> , <i>b</i> .....                                 | 702     |
| <i>C. imbricata</i> , Dana, 1847, pl. viii, fig. 5.....                                                        | 702     |
| <i>C. arcuata</i> , Dana, 1847, pl. viii, figs. 8 <i>a</i> , <i>b</i> .....                                    | 702-703 |
| <i>C. praeputia</i> , Dana, 1847, pl. viii, fig. 10.....                                                       | 703     |
| <i>C. siliqua</i> , Dana, 1847, pl. ix, figs. 1 <i>a</i> , <i>b</i> .....                                      | 703     |
| <i>C. simplex</i> , Dana, 1847, pl. ix, fig. 2.....                                                            | 703-704 |
| <i>C. (Avicula?) veneris</i> , Dana, 1847, pl. ix, figs. 3 <i>a</i> , <i>b</i> .....                           | 704     |
| <i>Avicula vulgensis?</i> (Verniculi), pl. ix, fig. 4.....                                                     | 704     |
| <i>Pterinea macroptera</i> (J. Morris).....                                                                    | 704     |
| <i>Pecten cinctus</i> , Dana, 1847, pl. ix, fig. 5.....                                                        | 704     |
| <i>Pecten tenuisculus</i> , Dana, 1847, pl. ix, figs. 6 <i>a</i> , 6 <i>b</i> .....                            | 704-705 |
| <i>Pecten tenuicollis</i> , Dana, 1847, pl. ix, fig. 7.....                                                    | 705     |
| <i>Pecten nitis</i> , n. s., Dana, 1849, pl. ix, figs. 8 <i>a</i> , <i>b</i> .....                             | 705     |
| <i>Pecten illawarrensis</i> (J. Morris), pl. ix, fig. 9.....                                                   | 705     |
| <i>Pecten squamuliferus</i> {J. Morris}.....                                                                   | 705     |
| —, pl. ix, fig. 10, Dana, 1849.....                                                                            | 705-706 |
| <b>Gasteropoda.</b>                                                                                            |         |
| <i>Pileopsis fenella</i> , Dana, 1847, pl. ix, figs. 13 <i>a</i> , <i>b</i> .....                              | 706     |
| <i>Pileopsis alta</i> , n. s., Dana, 1849, pl. ix, fig. 14 <i>a</i> .....                                      | 706     |
| <i>Pleurotomaria morristana</i> , McCoy, pl. ix, figs. 15, 15 <i>a</i> , 16.....                               | 706     |
| <i>Pleurotomaria nuda</i> , Dana, 1847, pl. ix, figs. 17 <i>a-c</i> .....                                      | 706     |
| <i>Pleurotomaria strzeleckiana</i> , Morris.....                                                               | 707     |
| <i>Platychisma oculus</i> (Morris), pl. x, fig. 1.....                                                         | 707     |
| <i>Platychisma rotundatum</i> , Morris.....                                                                    | 707     |
| <i>Platychisma depressum</i> , Dana, 1847, pl. x, figs. 2 <i>a</i> , <i>b</i> .....                            | 707     |
| <i>Natica</i> — ? Dana, 1847, pl. x, figs. 2 <i>a</i> , <i>b</i> .....                                         | 707     |
| <i>Bellerophon undulatus</i> , Dana, 1847, pl. x, figs. 4 <i>a</i> , <i>b</i> .....                            | 707     |
| <i>Bellerophon strictus</i> , Dana, 1847, pl. x, figs. 5 <i>a</i> , <i>b</i> .....                             | 707-708 |
| <i>Bellerophon micromphalus</i> , Morris, pl. x, figs. 6 <i>a</i> , <i>b</i> .....                             | 708     |
| <b>Cephalopoda.</b>                                                                                            |         |
| <i>Thesidina lanceolata</i> (Morris), pl. x, figs. 7 <i>a</i> , <i>b</i> .....                                 | 708     |
| <i>Conularia</i> .....                                                                                         | 708-709 |
| <i>C. incornata</i> , n. s., Dana, 1849, pl. x, fig. 8.....                                                    | 709-710 |
| <i>C. levigata</i> , Morris, pl. x, fig. 9.....                                                                | 710     |
| <i>C. tenuistriata?</i> (McCoy).....                                                                           | 710     |
| <b>Radiata.</b>                                                                                                |         |
| <i>Fenestella internata</i> (Lonsdale), pl. x, fig. 13.....                                                    | 710     |
| <i>Fenestella media</i> , n. s., Dana, 1849, pl. x, figs. 14, 14 <i>a</i> , and fig. 15.....                   | 710     |
| <i>Fenestella ampla</i> (Lonsdale), pl. xi, figs. 1, 1 <i>a</i> ; 2, 2 <i>a</i> .....                          | 710     |
| <i>Fenestella fossula</i> (Lonsdale), pl. xi, figs. 3 <i>a</i> , <i>b</i> .....                                | 710-711 |
| <i>Fenestella gracilis</i> , n. s. (Dana), 1849, pl. xi, fig. 4.....                                           | 711     |
| <i>Fenestella</i> , pl. xi, figs. 5, 5 <i>a</i> .....                                                          | 711     |
| <i>Chetetes crinita</i> (Lonsdale), Dana, pl. xi, figs. 6, 6 <i>a-c</i> .....                                  | 711     |
| <i>Chetetes tasmaniensis</i> (Lonsdale), Dana, pl. xi, figs. 7, 7 <i>a</i> , 8, 8 <i>a</i> .....               | 711     |
| <i>Chetetes orata</i> (Lonsdale), Dana, pl. xi, figs. 9, 9 <i>a</i> , <i>b</i> .....                           | 712     |
| <i>Chetetes gracilis</i> , n. s., Dana, 1849, pl. xi, figs. 10, 10 <i>a-c</i> .....                            | 712     |
| <i>Hemitrypa?</i> , pl. xv, fig. 10.....                                                                       | 712     |
| <i>Enercinital remains</i> , pl. xi, figs. 12 <i>a</i> , <i>b</i> , and pl. xi, figs. 13, 14, and fig. 15..... | 712     |
| <i>Pentadia</i> , Dana, 1847.....                                                                              | 712-713 |
| <i>Pentadia coronata</i> , pl. x, figs. 10, 10 <i>a-c</i> , 11 and 12.....                                     | 713     |
| <b>Fossil Plants.</b>                                                                                          |         |
| <b>Conifera.</b>                                                                                               |         |
| Fruit scales, pl. xii, figs. 1, 2, 3, 4, 5, 5 <i>a</i> , <i>b</i> , 6, 7, 8, 8 <i>a-d</i> .....                | 714     |
| <i>Noeggerathia</i> , n. g., Dana, 1849.....                                                                   | 715     |
| <i>N. spatulata</i> , n. s., Dana, 1849, pl. xii, fig. 9.....                                                  | 715     |
| <i>N. media</i> , n. s., Dana, 1849, pl. xii, fig. 10.....                                                     | 715     |
| <i>N. elongata</i> (J. Morris), Dana, 1849, pl. xii, fig. 11.....                                              | 715     |
| <i>Sphenopteris lobifolia</i> (Morris), pl. xii, fig. 12.....                                                  | 715-716 |
| <i>Glossopteris browniana</i> (Brongniart), pl. xii, fig. 13, 13 <i>a-c</i> , 14 (Young?).....                 | 716-717 |
| <i>Glossopteris ampla</i> , n. s., Dana, 1849, pl. xiii, fig. 13, <i>a</i> , <i>b</i> .....                    | 717     |
| <i>Glossopteris reticulatum</i> , n. s., Dana, 1849, pl. xiii, figs. 2, 3.....                                 | 717-718 |
| <i>Glossopteris elongata</i> , n. s., Dana, 1849, pl. xiii, fig. 4.....                                        | 718     |
| <i>Glossopteris? cordata</i> , n. s., Dana, 1849, pl. xiii, fig. 5.....                                        | 718     |
| <i>Glossopteris linearis</i> (McCoy).....                                                                      | 718     |

|                                                                                    | Page.   |
|------------------------------------------------------------------------------------|---------|
| <i>Phyllothea australis</i> , pl. xiii, fig. 6, pl. xiv, figs. 1 [21].....         | 718-719 |
| <i>Clasteria</i> , n. g., Dana, 1849.....                                          | 719     |
| <i>C. australis</i> , n. s., Dana, 1849.....                                       | 719-720 |
| <i>Anarthrocanna australis</i> , n. s., Dana, 1849, pl. xiv, fig. 6 <i>a</i> ..... | 720     |
| <i>Cystoscirides?</i> pl. xiv, fig. 6, <i>b</i> .....                              | 720     |
| <i>Austrella rigida</i> , n. s., Dana, 1849, pl. xiv, figs. 7, 8.....              | 720     |
| <i>Confervites? tenella</i> , n. s., Dana, 1849, pl. xiv, fig. 9.....              | 720     |

FOSSILS FROM TIERRA DEL FUEGO.

|                                                            |         |
|------------------------------------------------------------|---------|
| <i>Heliceras</i> , Dana, 1848.....                         | 720     |
| <i>H. fucpiensis</i> Dana, pl. xv, fig. 1 <i>a-c</i> ..... | 720-721 |

FOSSILS FROM SAN LORENZO, PERU.

|                                                                                |     |
|--------------------------------------------------------------------------------|-----|
| <i>Trigonia Lorentii</i> , n. s. (Dana), 1849, pl. xv, fig. 2 <i>a-c</i> ..... | 721 |
| <i>Turbo</i> ———. Dana, 1849, pl. xv, figs. 3 <i>a, b</i> .....                | 721 |
| <i>Nautilus tenui-planatus</i> , n. s., Dana, 1849, pl. xv, fig. 4.....        | 721 |

FOSSIL AMMONITE FROM THE ANDES.

|                                                         |     |
|---------------------------------------------------------|-----|
| <i>Ammonites pickeringi</i> , Dana, pl. xv, fig. 5..... | 721 |
| <i>Ammonites</i> , pl. xv, fig. 6.....                  | 721 |
| <i>Ostraca</i> pl. xv, fig. 7.....                      | 722 |

FOSSILS FROM NORTHWESTERN AMERICA.

|                                                                                                     |         |
|-----------------------------------------------------------------------------------------------------|---------|
| <i>Cetacea</i> , pl. xvi, fig. 1.....                                                               | 722     |
| Fishes, pl. xvi, fig. 2, pl. xvi, fig. 3, pl. xvii, figs. 1, 2 <i>a, b</i> .....                    | 722     |
| <i>Crustacea</i> .                                                                                  |         |
| <i>Callianassa oregonensis</i> , n. s., Dana, 1849.....                                             | 722-723 |
| <i>Balanus</i> ———? Dana, pl. xvii, fig. 4.....                                                     | 723     |
| <i>Radiata</i> .                                                                                    |         |
| <i>Galerites oregonensis</i> , n. s., Dana, 1849, figs. 5, 6, 6 <i>a</i> , pl. xxi, figs. 7, 8..... | 723     |





## IV.—THE WRITINGS OF CHRISTIAN GOTTFRIED EHRENBERG.

### 1.

EHRENBERG, C. G. On Infusorial Deposits on the River Chutes in Oregon. Amer. Jour. Sci., 2d ser., Vol. IX, p. 140. New Haven, 1850.

A brief notice of the author's work in the Monatsb. Akad., Berlin, February, 1849, p. 76.

### 2.

EHRENBERG, C. G. Über das mächtigste bis jetzt bekannt gewordene (angeblich 500 Fuss mächtige) Lager von mikroskopischen reinen kieselschaligen Süßwasser-Formen am Wasserfall-Flusse im Oregon. <Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königl. Preuss. Akademie der Wissenschaften zu Berlin aus dem Jahre 1849. February. pp. 76–87. Berlin, 1850.

|                               |                                  |
|-------------------------------|----------------------------------|
| <i>Amphora libyca.</i>        | <i>G. undulata.</i>              |
| <i>Campylodiscus americ.?</i> | <i>Himantidium arcus.</i>        |
| <i>Cocconeis jinnica.</i>     | <i>Navicula sigma.</i>           |
| <i>C. concentrica.</i>        | <i>N. bacillum.</i>              |
| <i>C. geminata.</i>           | <i>N. scalprum.</i>              |
| <i>C. lineata.</i>            | <i>N. semen.</i>                 |
| <i>C. oblonga.</i>            | <i>N. sifcula.</i>               |
| <i>C. protexta.</i>           | <i>Pinnularia affinis.</i>       |
| <i>C. punctata.</i>           | <i>P. amphiozys.</i>             |
| <i>Cocconeis asperum.</i>     | <i>P. digitus.</i>               |
| <i>C. cistula.</i>            | <i>P. gastrum.</i>               |
| <i>C. gibbum.</i>             | <i>P. macilentia.</i>            |
| <i>C. gracile.</i>            | <i>P. mesogongyla.</i>           |
| <i>C. lanceolatum.</i>        | <i>P. pachyptera.</i>            |
| <i>C. lunula.</i>             | <i>P. placentula.</i>            |
| <i>Discoplea oregonica.</i>   | <i>P. oregonica.</i>             |
| <i>Eunotia amphiozys.</i>     | <i>P. viridis.</i>               |
| <i>E. argus.</i>              | <i>P. viridula.</i>              |
| <i>E. gibba.</i>              | <i>Podosphenia pupula.</i>       |
| <i>E. gibberula.</i>          | <i>Rhaphoneis foliacea.</i>      |
| <i>E. granulata.</i>          | <i>R. lanceolata.</i>            |
| <i>E. librile.</i>            | <i>R. oregonica.</i>             |
| <i>E. subulata.</i>           | <i>Surirella bifrons.</i>        |
| <i>E. textricula.</i>         | <i>S. plicata.</i>               |
| <i>E. uncinata.</i>           | <i>Stanronceis baileyi.</i>      |
| <i>E. westermanni.</i>        | <i>S. semen.</i>                 |
| <i>E. zebra.</i>              | <i>Synedra ulna.</i>             |
| <i>E. zebrina.</i>            | <i>S. spendida.</i>              |
| <i>Fragilaria acuta.</i>      | <i>Amphidiscus armatus.</i>      |
| <i>F. amphicephala.</i>       | <i>Lithodontium furcatum.</i>    |
| <i>F. rhabdosoma.</i>         | <i>L. nasutum.</i>               |
| <i>Glaeonema paradoxum.?</i>  | <i>L. scorpius.</i>              |
| <i>Gomphonema gracile.</i>    | <i>Lithostylidium amphiodon.</i> |
| <i>G. herculaneum.</i>        | <i>L. crenulatum.</i>            |
| <i>G. longicolle.</i>         | <i>L. lœve.</i>                  |
| <i>G. mamilla.</i>            | <i>L. quadratum.</i>             |
| <i>G. minutissimum.</i>       | <i>L. rude.</i>                  |
| <i>G. olar.</i>               | <i>L. trabecula.</i>             |
| <i>G. oregonicum.</i>         | <i>Lithostylidium.?</i>          |
| <i>Gallionella crenata.</i>   | <i>Spongolithis acicularis.</i>  |
| <i>G. distans.</i>            | <i>S. aspera.</i>                |
| <i>G. granulata.</i>          | <i>S. fustis.</i>                |
| • <i>G. levis.</i>            | <i>S. inflexa.</i>               |
| <i>G. punctata.</i>           | <i>S. mesogongyla.</i>           |



## V—THE WRITINGS OF JAMES HALL.

### 1.

HALL, JAMES. Organic remains. Descriptions of organic remains collected by Captain J. C. Frémont, in the geographical survey of Oregon and North California. <Rep. Expl. Exp. to the Rocky Mountains and to Oregon and North California, by J. C. Frémont. Appendix B, pp. 304-310, pls. i-iv. Washington, 1845.

|                                                                                   | Page.   |
|-----------------------------------------------------------------------------------|---------|
| <i>Sphenopteris fremonti</i> , n. s., Hall, 1845, pl. ii, figs. 3, 3 a.....       | 304     |
| <i>S. triloba</i> , n. s., Hall, 1845, pl. i, fig. 8.....                         | 304     |
| <i>S. (?) paucifolia</i> , n. s., Hall, 1845, pl. ii, figs. 1 a-d.....            | 304-305 |
| <i>S. (?) trifoliata</i> , n. s., Hall, 1845, pl. ii, figs. 2, 2 a.....           | 305     |
| <i>Glossopteris phillipsii</i> , n. s., Hall, 1845, pl. ii, figs. 5, 5 a-c.....   | 305-306 |
| <i>Pecopteris undulata</i> , n. s., Hall, 1845, pl. i, figs. 1, 1 a.....          | 306     |
| <i>Pecopteris undulata</i> var., Hall, 1845, pl. i, figs. 2, 2 a, b.....          | 306     |
| <i>Pecopteris (?) odontopteroides</i> , n. s., Hall, 1845, pl. i, figs. 3, 4..... | 306     |
| <i>Trichopteris</i> , n. g., Hall, 1845.....                                      | 306     |
| <i>T. filamentosa</i> , n. s., Hall, 1845, pl. ii, fig. 6.....                    | 306-307 |
| <i>T. gracilis</i> , n. s., Hall, 1845, pl. i, fig. 5.....                        | 307     |
| Stems of ferns, pl. i, fig. 7.....                                                | 307     |
| Leaf of a Dicotyledonous plant (?), pl. ii, fig. 4.....                           | 307     |
| <i>Mya tellinoides</i> , n. s., Hall, 1845, pl. iii, figs. 1, 2.....              | 307     |
| <i>Nucula impressa</i> , (?) n. s., Hall, 1845, pl. iii, fig. 3.....              | 308     |
| <i>Cytherea parvula</i> , n. s., Hall, 1845, pl. iii, figs. 10, 10 a.....         | 308     |
| <i>Pleurotomaria uniangulata</i> , n. s., Hall, 1845, pl. iii, figs. 4, 5.....    | 308     |
| <i>Cerithium tenerum</i> , n. s., Hall, 1845, pl. iii, figs. 6, 6 a.....          | 308     |
| <i>Cerithium fremonti</i> , n. s., Hall, 1845, pl. iii, figs. 7, 7 a.....         | 308     |
| <i>Natica (?) occidentalis</i> , n. s., Hall, 1845, pl. iii, figs. 8, 8 a.....    | 308-309 |
| <i>Turritella bilineata</i> , n. s., Hall, 1845, pl. iii, fig. 9.....             | 309     |
| <i>Cerithium nodulosum</i> , n. s., Hall, 1845, pl. iii, figs. 11, 12.....        | 309     |
| <i>Turbo paludinaeformis</i> , n. s., Hall, 1845, pl. iii, fig. 13.....           | 309     |
| Leaves of Dicotyledonous plants, pl. iii, figs. 14, 15.....                       | 309     |
| <i>Inoceramus</i> ——— ?, Hall, 1845, pl. iv, figs. 1, 1 a.....                    | 309-310 |
| <i>Inoceramus</i> ——— ?, Hall, 1845, pl. iv, fig. 2.....                          | 310     |

### 2.

HALL, JAMES. Description of new or rare species of fossils, from the Palæozoic series. <Rep. on the Geology of the Lake Superior Land district, by J. W. Foster and J. D. Whitney. Part ii, chapter xiii, pp. 203-231, pls. xxiii-xxxv. Washington, 1851.

#### POTSDAM AND CALCIFEROUS SANDSTONES.

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>Lingula prima</i> , Conrad, pl. xxiii, figs. 1 a-g.....                     | 204     |
| <i>Lingula antiqua</i> , Hall, pl. xxiii, figs. 2 a-c.....                     | 204-205 |
| Trilobites of the Potsdam Sandstone.....                                       | 205     |
| <i>Dikell[oc]ephalus</i> , D. D. Owen, pl. xxiii, figs. 3 a-c, and fig. 4..... | 205-206 |

#### FOSSILS FROM THE CHAZY, BIRD'S EYE, BLACK RIVER, AND TRENTON LIMESTONES AND HUDSON RIVER GROUP.

|                                                                                |         |
|--------------------------------------------------------------------------------|---------|
| <i>Phenopora multipora</i> , n. s., Hall, 1851, pl. xxiv, figs. 1 a, b.....    | 206-207 |
| <i>Clathropora flabellata</i> , n. s., Hall, 1851, pl. xxiv, figs. 2 a, b..... | 207     |
| <i>Chaetetes lycoperdon</i> , Say, pl. xv, figs. 1 a-d.....                    | 207-208 |
| <i>Schizocrinus nodosus</i> ?, pl. xxv, figs. 2 a-c.....                       | 208     |



|                                                                                                                       | Page.   |
|-----------------------------------------------------------------------------------------------------------------------|---------|
| <i>Echinospaerites?</i> <i>n. s.</i> , Hall, 1851, pl. xxv, figs. 3 <i>a</i> , <i>b</i> .....                         | 208-209 |
| Crinoideæ, or <i>Cyatideæ</i> .....                                                                                   | 209     |
| — <i>!</i> , pl. xxv, figs. 4 <i>a-c</i> .....                                                                        | 209     |
| <i>Murchisonia major</i> , <i>n. s.</i> , Hall, 1851, pl. xxvi, figs. 1 <i>a-c</i> .....                              | 209-210 |
| <i>Asaphus barrandi</i> , <i>n. s.</i> , Hall, 1851, pl. xxvii, figs. 1 <i>a-d</i> , and pl. xxviii.....              | 210-211 |
| <i>Harpes exanabæ</i> , <i>n. s.</i> , Hall, 1851, pl. xxvii, fig. 2 <i>a</i> .....                                   | 211-212 |
| <i>Phacops callicephalus</i> , pl. xxvii, figs. 3 <i>a</i> , <i>b</i> .....                                           | 212     |
| <i>Catenipora gracilis</i> , <i>n. s.</i> , Hall, 1851, pl. xxix, figs. 1 <i>a</i> , <i>b</i> .....                   | 212-213 |
| <i>Sarcinula? obsoleta</i> , <i>n. s.</i> , Hall, 1851, pl. xxix, fig. 2 <i>a</i> , <i>b</i> .....                    | 213     |
| <i>Modiolopsis pholadiformis</i> , <i>n. s.</i> , Hall, 1851, pl. xxx, figs. 1 <i>a-c</i> , and pl. xxxi, fig. 1..... | 213-214 |
| <i>Modiolopsis modiolaris</i> , Hall, pl. xxxi, figs. 2 <i>a-d</i> .....                                              | 214-215 |
| <i>Ambonychia carinata</i> , Hall, pl. xxxi, fig. 3.....                                                              | 215     |

## CLINTON GROUP.

|                                        |         |
|----------------------------------------|---------|
| Tracks and trails of vertebrates?..... | 215-218 |
| Tracks of Crustaceans?.....            | 219-220 |

## NIAGARA GROUP.

|                                                                              |         |
|------------------------------------------------------------------------------|---------|
| <i>Huronian vertebralis</i> , Stokes, pl. xxxiv, fig. 1.....                 | 221     |
| <i>Huronian annulata</i> , <i>n. s.</i> , Hall, 1851, pl. xxxiv, fig. 4..... | 221-222 |
| <i>Discosorus conoideus</i> , pl. xxxiv, figs. 2 and 3.....                  | 222-223 |

## UPPER HELDERBERG LIMESTONES.

|                                                                            |         |
|----------------------------------------------------------------------------|---------|
| <i>Dictyonema fenestrata</i> , pl. xxxv, figs. 1 <i>a</i> , <i>b</i> ..... | 223-224 |
| <i>Proetus</i> — <i>!</i> , Hall, 1851, pl. xxxv, fig. 2.....              | 224     |
| <i>Phacops anchiops</i> , pl. xxxv, figs. 3 <i>a</i> , <i>b</i> .....      | 224-225 |

## LIST OF FOSSILS.

|                                                                                                              |     |
|--------------------------------------------------------------------------------------------------------------|-----|
| General remarks on the above list.....                                                                       | 229 |
| Table of the number of species of fossils found in the State of New York and the Lake Superior district..... | 230 |

## 3.

TALL, JAMES. Letter from Professor James Hall, of New York, containing observations on the Geology and Palæontology of the country traversed by the expedition, and notes upon some of the Fossils collected on the route. <Exploration and Survey of the Valley of the Great Salt Lake of Utah, including a reconnaissance of a new route through the Rocky Mountains, by Howard Stansbury. Appendix E, pp. 398-414, pls. i-iv. Philadelphia, 1852.

## CORALS.

|                                                                                                                             | Page.   |
|-----------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Cyathophyllideæ</i> .....                                                                                                |         |
| <i>Favophyllum? rugosum</i> , <i>n. s.</i> , Hall, 1852, pl. i, figs. 1 <i>a</i> , <i>b</i> .....                           | 407-408 |
| <i>Zaphrentis? multilamella</i> , <i>n. s.</i> , Hall, 1852, pl. i, fig. 2.....                                             | 408     |
| <i>Zaphrentis stansburii</i> , Hall, <i>n. s.</i> , 1852, pl. i, figs. 3 <i>a</i> , <i>b</i> .....                          | 407     |
| <i>Lithostro[n]tion</i> — (sp. indet.), Hall, 1852, pl. i, fig. 4 <i>a</i> , <i>b</i> .....                                 | 408     |
| <i>Brachiopoda</i> .....                                                                                                    |         |
| <i>Terebratula subtilita</i> , <i>n. s.</i> , Hall, 1852, pl. iv, figs. 1 <i>a</i> , <i>b</i> , 2 <i>a</i> , <i>b</i> ..... | 409     |
| <i>Spirifer hemiplicata</i> , <i>n. s.</i> , Hall, 1852, pl. iv, figs. 3 <i>a</i> , <i>b</i> .....                          | 409     |
| <i>S. octoplicata?</i> pl. iv, fig. 4 <i>a</i> , <i>b</i> .....                                                             | 409-410 |
| <i>S. triplicata</i> , Hall, <i>n. s.</i> , 1852, pl. iv, figs. 5 <i>a-c</i> .....                                          | 410     |
| <i>Chonetes variolata</i> , (D'Orb. sp.) DeKoninck, pl. iii, figs. 1 <i>a</i> , <i>b</i> .....                              | 410     |
| <i>Productus costatus?</i> DeKoninck, pl. iii, fig. 2.....                                                                  | 411     |
| <i>P. semireticulatus</i> , DeKoninck, pl. iii, figs. 3-5 <i>a</i> , <i>b</i> .....                                         | 411     |
| <i>Productus</i> — (sp. indet.), Hall, 1852, pl. iii, fig. 4.....                                                           | 411     |
| <i>Orthis umbraculata?</i> pl. iii, fig. 6.....                                                                             | 412     |
| <i>Acephala</i> .....                                                                                                       |         |
| <i>Avicula? cuxta</i> , pl. ii, figs. 1 <i>a</i> , <i>b</i> .....                                                           | 412     |
| <i>Tellinomya protensa</i> , Hall, <i>n. s.</i> , 1852, pl. ii, fig. 3.....                                                 | 412     |
| <i>Cypriocardia occidentalis</i> , <i>n. s.</i> , Hall, 1852, pl. iv, fig. 2.....                                           | 412     |
| <i>Allorisma terminalis</i> , <i>n. s.</i> , Hall, 1852, pl. ii, figs. 4 <i>a</i> , <i>b</i> .....                          | 413     |
| <i>A. nucula arata</i> , <i>n. s.</i> , Hall, 1852, pl. ii, figs. 5 <i>a</i> , <i>b</i> .....                               | 413     |
| <i>Gasteropoda</i> .....                                                                                                    |         |
| <i>Pleurotomaria coronata</i> , <i>n. s.</i> , Hall, 1852, pl. ii, figs. 6 <i>a-d</i> .....                                 | 413-414 |
| <i>Euomphalus subplannus</i> , <i>n. s.</i> , Hall, 1852, pl. ii, figs. 7 <i>a</i> , <i>b</i> .....                         | 414     |

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CRETACEOUS SPECIES.

|                                                                                  | Page    |
|----------------------------------------------------------------------------------|---------|
| <i>Graptolites</i> , Lamarck .....                                               | 99      |
| <i>G. pitcheri</i> , Morton, 1834, pl. i, figs. 1-6 .....                        | 99-100  |
| <i>G. pitcheri</i> , var. <i>navia</i> , Hall, 1856, (pl. i, figs. 7-10) * ..... | 100     |
| <i>Ostrea</i> , Linnaeus .....                                                   | 100     |
| <i>O. congesta</i> , Conrad, 1843, pl. i, fig. 11 .....                          | 100-101 |

CARBONIFEROUS SPECIES.

|                                                                                        |         |
|----------------------------------------------------------------------------------------|---------|
| <i>Terebratula</i> [L.] Sw. ....                                                       | 101     |
| <i>T. millepunctata</i> , n. s., Hall, 1856, pl. ii, figs. 1, 2 .....                  | 101     |
| <i>T. subtilita</i> , Hall, pl. ii, figs. 3-5 .....                                    | 101     |
| <i>Spirifer</i> , Sowerby .....                                                        | 101     |
| <i>S. lineatus</i> , pl. ii, figs. 6-8 .....                                           | 101-102 |
| <i>S. kentuckensis</i> , Shumard, 1855, pl. ii, figs. 10, 11 .....                     | 102     |
| <i>S. cameratus</i> , Morton, 1836, pl. ii, figs. 9, 12, 13 .....                      | 102-103 |
| <i>Productus</i> , Sowerby .....                                                       | 103     |
| <i>P. semireticulatus</i> , Martin, 1809, pl. ii, figs. 16, 17 .....                   | 103     |
| <i>P. rogersi</i> , Norwood & Pratten, 1854, pl. ii, figs. 14, 15 .....                | 104     |
| Imperfect specimens, the specific characters of which are obscure or indeterminable .. | 104-105 |

5.

HALL, JAMES. Geology and Palæontology of the Boundary. <U. S. and Mex. Boundary Survey. Report of William H. Emory, vol. i, part ii, pp. 101-140, and 144-146, pls. i and xx and xxi pars. Washington, 1857.

The fossils figured on pl. xx were apparently named by James Hall, but no descriptions accompany them.

- Columnaria thomii*, n. s., Hall, 1857, pl. xx, figs. 1 *a-d*.  
*Terebratula mexicana*, n. s., Hall, 1857, pl. xx, figs. 2 *a-c*.  
*Orthis arachnoides*, n. s., Hall, 1857, pl. xx, figs. 3 *a, b*.  
*Euomphalus michlerianus*, n. s., Hall, 1857, pl. xx, fig. 4.  
*Asaphus emoryi*, n. s., Hall, 1857, pl. xx, fig. 5.

The Echinoderms in this report are described by Professor Hall.

|                                                                                | Page.   |
|--------------------------------------------------------------------------------|---------|
| <i>Pyrina Parryi</i> , n. s., Hall, 1857, pl. i, figs. 1 <i>a-d</i> .....      | 144-145 |
| <i>Toxaster texanus</i> , Reamer, pl. i, figs. 2 <i>a-c</i> .....              | 145     |
| <i>Cyphosoma texanum</i> , Reamer, pl. i, figs. 3 <i>a-c</i> .....             | 145     |
| <i>Holotypus planatus</i> , n. s., Hall, 1857, pl. i, figs. 4 <i>a-f</i> ..... | 145-146 |
| <i>Toxaster elegans</i> , Shumard, sp. pl. xxi, figs. 1 <i>a-e</i> .....       | 146     |

*Gryphea Pitcheri*, (Mort.), Hall is figured on pl. xxi, figs. 3 *a-c*, but its locality is not mentioned and it is not described.

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HALL, JAMES, and WHITFIELD, R. P. Palæontology. <Rep. Geol. Expl. 40th parallel by Clarence King, vol. iv, part ii, pp. 198-302, pls. i-vii. Washington, 1877.

FOSSELS OF THE POTSDAM GROUP.

|                                                                    | Page. |
|--------------------------------------------------------------------|-------|
| <i>Brachiopoda</i> .                                               |       |
| <i>Obolus</i> , Bill. ....                                         | 203   |
| <i>O. discoida</i> , n. s., H. & W., 1877, pl. i, figs. 1, 2 ..... | 205   |
| <i>Lingulepis</i> , Hall .....                                     | 206   |
| <i>L. nana</i> , n. s., H. & W., 1877, pl. i, figs. 5-7 .....      | 206   |

\* These figures are copied from Marcou's figures of *Gryphea Pitcheri*, Mort., except fig. 10, which is copied from a figure of Marcou's *Gryphea dilatata*, Sow., Bull. Geol. Soc. France, 2d ser. vol. xii, pl. xxi, and Geology of North America, pl. iv.

|                                                                                                               | Page.   |
|---------------------------------------------------------------------------------------------------------------|---------|
| <i>L. ? minuta</i> , n. s., H. & W., 1877, pl. i, figs. 3, 4.....                                             | 206-207 |
| <i>Kutorgina</i> , Billings.....                                                                              | 207     |
| <i>K. minutissima</i> , n. s., H. & W., 1877, pl. i, figs. 11, 12.....                                        | 207-208 |
| <i>Leptena</i> , Dalman.....                                                                                  | 208     |
| <i>L. melita</i> , n. s., H. & W., 1877, pl. i, figs. 13, 14.....                                             | 208-209 |
| <b>Crustacea.</b>                                                                                             |         |
| <i>Conocephalites</i> , Zenker, = <i>Conocoryphe</i> Corda.....                                               | 200     |
| Subgenus <i>Crepicephalus</i> , Owen? = <i>Loganellus</i> , Devine.....                                       | 209     |
| <i>Crepicephalus</i> ( <i>Loganellus</i> ) <i>haguei</i> , n. s., H. & W., 1877, pl. ii, figs. 14, 15.....    | 210-212 |
| <i>C. (Loganellus) nitidus</i> , n. s., H. & W., 1877, pl. figs. 8-10.....                                    | 212-214 |
| <i>C. (Loganellus) granulosus</i> , n. s., H. & W., 1877, pl. ii, figs. 2, 3.....                             | 214-215 |
| <i>C. (Loganellus) maculosus</i> , n. s., H. & W., 1877, pl. ii, figs. 24, 25, and 26 f.....                  | 215-216 |
| <i>C. (Loganellus) unisulcatus</i> , n. s., H. & W., 1877, pl. ii, figs. 22, 23.....                          | 216-217 |
| <i>C. (Loganellus) simulator</i> , n. s., H. & W., 1877, pl. ii, figs. 16-18.....                             | 218     |
| <i>C. (Loganellus) anytus</i> , n. s., H. & W., 1877, pl. ii, figs. 19-21.....                                | 219-220 |
| <i>C. (Bathyrurus?) angulatus</i> , n. s., H. & W., 1877, pl. ii, fig. 28.....                                | 220-221 |
| <i>Pterocephalus</i> , Roemer.....                                                                            | 221     |
| <i>Conocephalites</i> ( <i>Pterocephalus</i> ) <i>laticeps</i> , n. s., H. & W., 1877, pl. ii, figs. 4-7..... | 221-223 |
| <i>Ptychaspis</i> , Hall.....                                                                                 | 223     |
| <i>P. pusulosa</i> , n. s., H. & W., 1877, pl. ii, fig. 27.....                                               | 223-224 |
| <i>Choriocephalus</i> , Hall.....                                                                             | 224     |
| <i>C. tumifrons</i> , n. s., H. & W., 1877, pl. ii, figs. 38, 39.....                                         | 224-225 |
| <i>Dikelocephalus</i> , Owen.....                                                                             | 225-226 |
| <i>D. bilobatus</i> , n. s., H. & W., 1877, pl. ii, fig. 36.....                                              | 226     |
| <i>D. multieinctus</i> , n. s., H. & W., 1877, pl. ii, fig. 37.....                                           | 226-227 |
| <i>D. flabellifer</i> , n. s., H. & W., 1877, pl. ii, figs. 29, 30.....                                       | 227-228 |
| <i>Agnostus</i> , Brongniart.....                                                                             | 228     |
| <i>A. communis</i> , n. s., H. & W., 1877, pl. i, figs. 28, 29.....                                           | 228-229 |
| <i>A. neon</i> , n. s., H. & W., 1877, pl. i, figs. 26, 27.....                                               | 229-230 |
| <i>A. prolongus</i> , n. s., H. & W., 1877, pl. i, figs. 30, 31.....                                          | 230-231 |
| <i>A. tumidosus</i> , n. s., H. & W., 1877, pl. i, fig. 32.....                                               | 231     |
| FOSSILS OF THE LOWER SILURIAN.                                                                                |         |
| <b>Brachiopoda.</b>                                                                                           |         |
| <i>Lioenolepsis</i> , Hall.....                                                                               | 232     |
| <i>L. ella</i> , n. s., H. & W., 1877, pl. i, fig. 8.....                                                     | 232     |
| <i>Orthis</i> , Dalman.....                                                                                   | 232     |
| <i>O. pogonipensis</i> , n. s., H. & W., 1877, pl. i, figs. 9, 10.....                                        | 232-233 |
| <i>Strophomena</i> , Rafinesque.....                                                                          | 233     |
| <i>S. nemea</i> , n. s., H. & W., 1877, pl. i, fig. 15.....                                                   | 233-234 |
| <i>Porambonites</i> , Pander.....                                                                             | 234     |
| <i>P. obscurus</i> , n. s., H. & W., 1877, pl. i, fig. 16.....                                                | 234     |
| <b>Gasteropoda.</b>                                                                                           |         |
| <i>Raphistoma</i> , Hall.....                                                                                 | 235     |
| <i>R. acuta</i> , n. s., H. & W., 1877, pl. i, figs. 20-22.....                                               | 235     |
| <i>Maclurea</i> , Lesueur.....                                                                                | 235     |
| <i>M. minima</i> , n. s., H. & W., 1877, pl. i, figs. 17-19.....                                              | 235-236 |
| <i>Fusispira</i> , Hall.....                                                                                  | 236     |
| <i>F. compacta</i> , n. s., H. & W., 1877, pl. i, fig. 25.....                                                | 236-237 |
| <i>Cyrtolites</i> , Conrad.....                                                                               | 237     |
| <i>C. sinuatus</i> , n. s., H. & W., 1877, pl. i, figs. 23, 24.....                                           | 237     |
| <b>Crustacea.</b>                                                                                             |         |
| <i>Conocephalites</i> , Zenker.....                                                                           | 237     |
| <i>C. subcoronatus</i> , n. s., H. & W., 1877, pl. ii, fig. 1.....                                            | 237-238 |
| <i>Crepicephalus</i> , Owen? = <i>Loganellus</i> , Devine.....                                                | 238     |
| <i>C.?</i> ( <i>Loganellus</i> ) <i>quadrans</i> , n. s., H. & W., 1877, pl. ii, figs. 11-13.....             | 238-240 |
| <i>Dikelocephalus</i> , Owen.....                                                                             | 240     |
| <i>D. quadriceps</i> , n. s., H. & W., 1877, pl. i, figs. 37-40.....                                          | 240-241 |
| <i>D. wachschensis</i> , n. s., H. & W., 1877, pl. i, fig. 35.....                                            | 241-242 |
| <i>D. ? gothicus</i> , n. s., H. & W., 1877, pl. i, fig. 36.....                                              | 242-243 |
| <i>Bathyrurus</i> , Billings.....                                                                             | 243     |
| <i>B. pogonipensis</i> , n. s., H. & W., 1877, pl. i, figs. 33, 34.....                                       | 243-244 |
| <i>Oxygita</i> , Brongniart.....                                                                              | 244     |
| <i>O. producta</i> , n. s., H. & W., 1877, pl. ii, figs. 31-34.....                                           | 244-245 |
| <i>O. parabola</i> , n. s., H. & W., 1877, pl. ii, fig. 35.....                                               | 245-246 |

|                                                                                        | Page.   |
|----------------------------------------------------------------------------------------|---------|
| FOSSILS OF THE DEVONIAN.                                                               |         |
| <i>Brachiopoda.</i>                                                                    |         |
| <i>Strophodontia</i> , Hall .....                                                      | 246     |
| <i>S. canace</i> , H. & W., pl. iii, figs. 1-3 .....                                   | 246-247 |
| <i>Rhynchonella</i> , Fischer .....                                                    | 247     |
| <i>R. emmonsii</i> , n. s., H. & W., 1877, pl. iii, figs. 4-8 .....                    | 247-248 |
| <i>Lamellibranchiata.</i>                                                              |         |
| <i>Paraceras</i> , Hall .....                                                          | 248     |
| <i>P. peroccidens</i> , n. s., H. & W., 1877, pl. iii, figs. 14-17 .....               | 248     |
| <i>Nuculites</i> , Conrad .....                                                        | 248     |
| <i>N. triangulus</i> , n. s., H. & W., 1877, pl. iii, figs. 12, 13 .....               | 248-249 |
| <i>Lanulicardium</i> , Munster .....                                                   | 249     |
| <i>L. frugosum</i> , Meek, pl. ii, figs. 9, 11 .....                                   | 249-250 |
| <i>Gasteropoda.</i>                                                                    |         |
| <i>Bellerophon</i> , Montf. ....                                                       | 250     |
| <i>B. natus</i> , n. s., H. & W., 1877, pl. iii, figs. 18-20 .....                     | 250-251 |
| FOSSILS OF THE WAVERLY GROUP.                                                          |         |
| <i>Radiata.</i>                                                                        |         |
| <i>Michelina</i> , D'Kon. ....                                                         | 251     |
| <i>Michelina</i> ——sp.? H. & W., 1877, pl. iv, fig. 19 .....                           | 251-252 |
| <i>Brachiopoda.</i>                                                                    |         |
| <i>Streptorhynchus</i> , King .....                                                    | 252     |
| <i>S. equivalvis</i> , Hall, pl. iv, figs. 1, 2 .....                                  | 252     |
| <i>S. inflatus</i> , White & White, 1862, pl. iv, fig. 3 .....                         | 252-253 |
| <i>Strophomena</i> , Rafinesque .....                                                  | 253     |
| <i>S. rhomboidalis</i> , Wilckens, pl. iv, fig. 4 .....                                | 253     |
| <i>Chonetes</i> , Fischer .....                                                        | 253     |
| <i>C. loganensis</i> , n. s., H. & W., 1877, pl. iv, fig. 9 .....                      | 253-254 |
| <i>Spirifera</i> , Sow .....                                                           | 254     |
| <i>S. centronata</i> , Winchell, 1865, pl. iv, figs. 5, 6 .....                        | 254-255 |
| <i>S. alba-picensis</i> , n. s., H. & W., 1877, pl. iv, figs. 7, 8 .....               | 255-256 |
| <i>Athyris</i> , McCoy .....                                                           | 256     |
| <i>A. claytoni</i> , n. s., H. & W., 1877, pl. iv, figs. 15-17 .....                   | 256-257 |
| <i>A. planosulcata</i> ? n. s., H. & W., 1877, pl. iv, figs. 10, 11 .....              | 257     |
| <i>Rhynchonella</i> , Fischer .....                                                    | 257     |
| <i>R. pustulosa</i> , White? pl. iv, figs. 12-14 .....                                 | 257-258 |
| <i>Terebratulula</i> (Lilhwyl), Brug .....                                             | 258     |
| <i>T. utah</i> , n. s., H. & W., 1877, pl. iv, fig. 18 .....                           | 258     |
| <i>Gasteropoda.</i>                                                                    |         |
| <i>Eumphalus</i> , Sow .....                                                           | 259     |
| <i>E. (Straparollus) utahensis</i> , n. s., H. & W., 1877, pl. iv, figs. 20-23 .....   | 259-260 |
| <i>E. laxus</i> , White, MSS., pl. iv, figs. 24, 25 .....                              | 260-261 |
| <i>E. (Straparollus) ophirensis</i> , n. s., H. & W., 1877, pl. iv, figs. 26, 27 ..... | 261     |
| <i>Crustacea.</i>                                                                      |         |
| <i>Proetus</i> , Stein. ....                                                           | 262     |
| <i>P. peroccidens</i> , n. s., H. & W., 1877, pl. iv, figs. 28-32 .....                | 262-264 |
| <i>P. loganensis</i> , n. s., H. & W., 1877, pl. iv, fig. 33 .....                     | 264     |
| FOSSILS OF THE LOWER CARBONIFEROUS.                                                    |         |
| <i>Brachiopoda.</i>                                                                    |         |
| <i>Orthis</i> , Dalman .....                                                           | 265     |
| <i>O. resupinata</i> ? Martin, sp., pl. v., figs. 1, 2 .....                           | 265     |
| <i>Productus</i> , Sowerby .....                                                       | 265     |
| <i>P. flemingi</i> var. <i>burlingtonensis</i> , Hall, pl. v, figs. 9-12 .....         | 265-266 |
| <i>P. lævicostus</i> ? White? 1860, pl. v, figs. 7, 8 .....                            | 266-267 |
| <i>P. semireticulatus</i> , Martio, pl. v, figs. 5, 6 .....                            | 267-268 |
| <i>P. elegans</i> , n. s., H. & W., 1877, pl. v, figs. 3, 4 .....                      | 268-269 |
| <i>Spirifera</i> , Sowerby .....                                                       | 269     |
| <i>S. striata</i> , pl. v, figs. 13-15 .....                                           | 269-270 |
| <i>S. setigera</i> , Hall, pl. v, figs. 17, 18 .....                                   | 270-271 |
| <i>Spirifera</i> ——sp.? H. & W., 1877, pl. v, fig. 16 .....                            | 271     |
| <i>Athyris</i> , McCoy .....                                                           | 271     |
| <i>A. subquadrata</i> ? Hall, pl. v, figs. 19, 20 .....                                | 271-272 |
| FOSSILS OF THE COAL-MEASURES AND PERMO-CARBONIFEROUS.                                  |         |
| <i>Lamellibranchiata.</i>                                                              |         |
| <i>Arctolopecten</i> , McCoy .....                                                     | 273     |
| <i>A. ueberensis</i> , n. s., H. & W., 1877, pl. vi, fig. 5 .....                      | 273     |



|                                                                                                     | Page.   |
|-----------------------------------------------------------------------------------------------------|---------|
| <i>A. curto-cardinalis</i> , n. s., H. & W., 1877, pl. vi, fig. 4.....                              | 273-274 |
| <i>A. parvulus</i> , n. s., H. & W., 1877, pl. vi, fig. 6.....                                      | 274-275 |
| <i>Myalina</i> , De Koninck.....                                                                    | 275     |
| <i>M. aviculoides</i> , M. & H., 1860, pl. vi, fig. 8.....                                          | 275-276 |
| <i>M. permiana</i> , Swallow, 1858, pl. vi, fig. 7.....                                             | 276     |
| <i>Sedgwickia</i> , McCoy.....                                                                      | 276     |
| <i>S. ? concava</i> , M. & H., 1858, pl. vi, fig. 3.....                                            | 276-277 |
| <i>Cardiomorpha</i> , De Koninck.....                                                               | 277     |
| <i>C. missouriensis</i> , Swallow, 1858, pl. vi, figs. 1, 2.....                                    | 277     |
| <b>Cephalopoda.</b>                                                                                 |         |
| <i>Cyrtoceras</i> , Goldf.....                                                                      | 278     |
| <i>C. cassator</i> , n. s., H. & W., 1877, pl. vi, fig. 15.....                                     | 278     |
| <i>Goniatites</i> , De Haan.....                                                                    | 279     |
| <i>G. kingii</i> , n. s., H. & W., 1877, pl. vi, figs. 9-14.....                                    | 279-280 |
| <b>FOSSILS OF THE TRIASSIC FORMATION.</b>                                                           |         |
| <b>Radiata.</b>                                                                                     |         |
| <b>Echinodermata.</b>                                                                               |         |
| <i>Pentacrinites</i> , Miller.....                                                                  | 280     |
| <i>P. asteriscus</i> ? M. & H., 1858, pl. vi, fig. 16.....                                          | 280-281 |
| <b>Brachiopoda.</b>                                                                                 |         |
| <i>Spiriferina</i> , D'Orb.....                                                                     | 281     |
| <i>S. homfragi</i> ? Gabb, pl. vi, fig. 18.....                                                     | 281     |
| <i>Spirifera</i> ( <i>Spiriferina</i> ?) <i>alia</i> , n. s., H. & W., 1877, pl. vi, fig. 17.....   | 281-282 |
| <i>Terebratula</i> , (Llhwyl.), Brug.....                                                           | 282     |
| <i>T. lumboldtensis</i> , Gabb, pl. vi, figs. 22-24.....                                            | 282-283 |
| <b>Lamellibranchiata.</b>                                                                           |         |
| <i>Edmondia</i> , De Koninck.....                                                                   | 283     |
| <i>E. myrina</i> , n. s., H. & W., 1877, pl. vi, fig. 19.....                                       | 283     |
| <b>FOSSILS OF THE JURASSIC PERIOD.</b>                                                              |         |
| <b>Brachiopoda.</b>                                                                                 |         |
| <i>Rhynchonella</i> , Fischer.....                                                                  | 284     |
| <i>R. myrina</i> , n. s., H. & W., 1877, pl. vii, figs. 1-5.....                                    | 284     |
| <i>R. gnathophora</i> ? Meek, pl. vii, fig. 6.....                                                  | 284-285 |
| <i>Terebratula</i> (Llhwyl.), Brug.....                                                             | 285     |
| <i>T. augusta</i> , n. s., H. & W., 1877, pl. vii, figs. 7-10.....                                  | 285     |
| <b>Lamellibranchiata.</b>                                                                           |         |
| <i>Ostrea</i> , Linn.....                                                                           | 285     |
| <i>Ostrea</i> ——— sp. ? H. & W., 1877, pl. vii, fig. 12.....                                        | 285-286 |
| <i>Gryphæa</i> , Lam.....                                                                           | 286     |
| <i>G. calceola</i> , var. <i>nebrascensis</i> , H. & W., 1877, M. & H., 1861, pl. vii, fig. 11..... | 286-287 |
| <i>Aviculopecten</i> , McCoy.....                                                                   | 288     |
| <i>A. (Eumierotis) ? augustensis</i> , n. s., H. & W., 1877, pl. vii, figs. 14-16.....              | 288     |
| <i>Eumierotis</i> , Meek.....                                                                       | 289     |
| <i>E. curta</i> , Hall, pl. vii, fig. 24.....                                                       | 289     |
| <i>Campanectes</i> , Agassiz.....                                                                   | 289     |
| <i>C. bellistriatus</i> , Meek, pl. vii, fig. 13.....                                               | 289-290 |
| <i>C. extenuatus</i> , Meek, pl. vii, fig. 18.....                                                  | 290-291 |
| <i>C. pertenuistriatus</i> , n. s., H. & W., 1877, pl. vii, fig. 17.....                            | 291-292 |
| <i>Lima</i> , Brug.....                                                                             | 292     |
| <i>L. (Pugiosstoma) occidentalis</i> , n. s., H. & W., 1877, pl. vii, fig. 23.....                  | 292-293 |
| <i>Trigonia</i> , Brug.....                                                                         | 293     |
| <i>T. quadrangularis</i> , n. s., H. & W., 1877, pl. vii, fig. 22.....                              | 293-294 |
| <i>Leptocardia</i> , (n. g.), H. & W., 1877.....                                                    | 294     |
| <i>L. typica</i> , n. s., H. & W., 1877, pl. vii, figs. 26-29.....                                  | 295-296 |
| <i>L. carditoidea</i> , n. s., H. & W., 1877, pl. vii, fig. 25.....                                 | 296-297 |
| <i>Astarte</i> , Sowerby.....                                                                       | 297     |
| <i>A. ? arenosa</i> , n. s., H. & W., 1877, pl. vi, figs. 20-21.....                                | 297-298 |
| <b>Gastropoda.</b>                                                                                  |         |
| <i>Natica</i> , Lam.....                                                                            | 298     |
| <i>N. ? letia</i> , n. s., H. & W., 1877, vii, figs. 19-21.....                                     | 298-299 |
| Classified list of the fossils described in this report.....                                        | 301-302 |

## VI.—THE WRITINGS OF ANGELO HEILPRIN.

### 1.

HEILPRIN, ANGELO. On some new species of Eocene mollusca from the southern United States. <Proc. U. S. National Museum, vol. iii, pp. 149-152, pl. 1, 1880. Washington, 1881.

|                                                                        | Page    |
|------------------------------------------------------------------------|---------|
| <i>Phacelidonta</i> , Lamarek.....                                     | 149     |
| <i>P. parvula</i> , n. s., Heilprin, 1880, pl. —, fig. 1.....          | 149-150 |
| <i>P. parvula</i> , n. s., Heilprin, 1880, pl. —, fig. 2.....          | 150     |
| <i>P. platysoma</i> , n. s., Heilprin, 1880, pl. —, fig. 3.....        | 150     |
| <i>Enclithodon</i> , Gabb.....                                         | 150     |
| <i>E. encrinurus</i> , n. s., Heilprin, 1880, pl. —, fig. 4.....       | 150     |
| <i>Scalaria</i> , Lamarek.....                                         | 150     |
| <i>S. unilineata</i> , n. s., Heilprin, 1880, pl. —, fig. 5.....       | 150-151 |
| <i>Fusus</i> , Lamarek.....                                            | 151     |
| Subgenus <i>Strepsidura</i> , Swainson.....                            | 151     |
| <i>F. (Strepsidura) maynichi</i> , n. s., Heilprin, pl. —, fig. 6..... | 151     |
| <i>Terebra</i> , Lamarek.....                                          | 151     |
| <i>T. plicifera</i> , n. s., Heilprin, pl. —, fig. 8.....              | 151     |
| <i>Crassatella</i> , Lamarek.....                                      | 151     |
| <i>C. delirix</i> , n. s., Heilprin, pl. —, fig. 9.....                | 151-152 |

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HEILPRIN, ANGELO. North American tertiary Ostreidae. <4th Annual Rep. of the director of the U. S. Geological Survey. A review of the fossil ostreidae of North America; and a comparison of the fossil with the living forms by C. A. White. Appendix I, pp. 309-316, pls. lxiv-lxxii. Washington, 1883.

|                                                                                  | Page. |
|----------------------------------------------------------------------------------|-------|
| <i>Ostrea</i> , Linnaeus.....                                                    | 309   |
| EOCENE.                                                                          |       |
| <i>Ostrea alabamensis</i> , Lea, pl. lxiv, figs. 2-4.....                        | 309   |
| <i>Ostrea carolinensis</i> , Conrad.....                                         | 309   |
| <i>Ostrea compressirostra</i> , Say, pl. lxv, figs. 1-2.....                     | 309   |
| <i>Ostrea cretacea</i> , Morton.....                                             | 310   |
| <i>Ostrea dicaricata</i> , Lea, pl. lxiv, fig. 1.....                            | 310   |
| <i>Ostrea eversii</i> , Melville, sp., pl. lxiv, figs. 5-8.....                  | 310   |
| <i>Ostrea fulcifrons</i> , Conrad.....                                           | 311   |
| <i>Ostrea mortoni</i> , Gabb.....                                                | 311   |
| <i>Ostrea sellaformis</i> , Conrad, pl. lxii, figs. 1, 2; pl. lxiii, fig. 1..... | 311   |
| <i>Ostrea thursa</i> , Gabb, pl. lxiii, figs. 4-6.....                           | 311   |
| <i>Ostrea turgida</i> , Conrad.....                                              | 311   |
| <i>Ostrea turgida</i> , Conrad.....                                              | 311   |

### OLIGOCENE.

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| <i>Ostrea georgiana</i> , Conrad.....                             | 311-312 |
| <i>Ostrea vicksburgensis</i> , Conrad, pl. lxiii, figs. 2, 3..... | 312     |

### MIOCENE.

|                                                             |     |
|-------------------------------------------------------------|-----|
| <i>Ostrea atasodi</i> , Gabb, pl. lxviii, figs. 4, 5.....   | 312 |
| <i>Ostrea borealis</i> , Lamarek.....                       | 312 |
| <i>Ostrea contracta</i> , Conrad, pl. lxix, figs. 1, 2..... | 312 |

|                                                                          | Page    |
|--------------------------------------------------------------------------|---------|
| <i>Ostrea disparilis</i> , Conrad, pl. lxxi, figs. 1, 2.....             | 312     |
| <i>Ostrea panzana</i> , Conrad.....                                      | 313     |
| <i>Ostrea percrassa</i> , Conrad, pl. lxxvii, fig. 3.....                | 313     |
| <i>Ostrea sculpturata</i> , Conrad, pl. lxx, fig. 2.....                 | 313     |
| <i>Ostrea subfalcata</i> , Conrad, pl. lxxviii, figs. 1-3.....           | 313     |
| <i>Ostrea subjecta</i> , Conrad.....                                     | 313     |
| <i>Ostrea tayloriana</i> , Gabb, pl. lxxvii, figs. 1, 2.....             | 313     |
| <i>Ostrea titan</i> , Conrad.....                                        | 313-314 |
| <i>Ostrea veleriana</i> , Conrad, pl. lxx, fig. 1.....                   | 314     |
| <i>Ostrea virginica</i> , Gmelin (= <i>O. virginiana</i> , Lamarck)..... | 314     |

## PLIOCENE.

|                                                             |     |
|-------------------------------------------------------------|-----|
| <i>Ostrea atwoodi</i> , Gabb.....                           | 314 |
| <i>Ostrea bourgeoisii</i> , Rémond, pl. lxxi, fig. 1.....   | 314 |
| <i>Ostrea heermanni</i> , Conrad.....                       | 314 |
| <i>Ostrea vespertina</i> , Conrad, pl. lxxi, figs. 2-4..... | 315 |

## POST-PLIOCENE.

|                                                              |     |
|--------------------------------------------------------------|-----|
| <i>Ostrea conchaphila</i> , Carpenter.....                   | 315 |
| <i>Ostrea fundata</i> (Say ?), F. S. Holmes.....             | 315 |
| <i>Ostrea gallus</i> , Valenciennes.....                     | 315 |
| <i>Ostrea lurida</i> , Carpenter, pl. lxxii, figs. 2, 3..... | 316 |
| <i>Ostrea veatchii</i> , Gabb, pl. lxxii, fig. 1.....        | 316 |

## VII.—THE WRITINGS OF ALPHEUS HYATT.

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HYATT, ALPHEUS. [Descriptions of new genera and remarks on new species of Triassic fossils.] < Rep. Geol. Expl. 40th Parallel, by Clarence King. Vol. iv, part i, pp. 107-128 *pars*. Washington, 1877.

|                                                                                    | Page.   |
|------------------------------------------------------------------------------------|---------|
| <i>Clydonitidae</i> , n. f., Hyatt, 1877                                           | 107     |
| * <i>Coroceras</i> , n. g., Hyatt, 1877                                            | 107-108 |
| <i>Clydonites</i> , Hauser                                                         | 109     |
| <i>C. lævidorsatus</i> , Hauser, sp., 1860, pl. x, fig. 7                          | 109-110 |
| <i>Trachyceratidae</i> , n. f., Hyatt, 1877                                        | 110     |
| † <i>Gymnotoceras</i> , n. g., Hyatt, 1877                                         | 110-111 |
| <i>G. rotelliforme</i> , Meek, 1877, pl. x, figs. 9, 9 a                           | 112-113 |
| <i>G. blakei</i> , Gabb, sp., 1864, pl. x, figs. 10, a-c, and pl. xi, figs. 6, 6 a | 115-116 |
| <i>Trachyceras</i> , Laube                                                         | 116     |
| <i>T. whitneyi</i> , Gabb, sp., 1864, pl. xi, figs. 3, 3 a                         | 117-118 |
| <i>T. judicarium</i> , Mojsisovics, 1869, pl. xi, figs. 1, 1 a                     | 118     |
| <i>Arcestidae</i>                                                                  |         |
| <i>Arcestes</i> , Suess, 1865                                                      | 119-120 |
| <i>A. ? perplanus</i> , Meek, 1877, pl. xi, figs. 7, 7 a                           | 121     |
| <i>A. gabbi</i> , Meek, 1877, pl. x, figs. 6, 6 a, b                               | 123     |
| <i>Phasanolidae</i> , Hyatt, 1877                                                  | 124     |
| ‡ <i>Acrochordiceras</i> , n. g., Hyatt, 1877                                      | 124     |
| <i>A. hyatti</i> , Meek, 1877, pl. xi, figs. 5, 5 a                                | 125-126 |
| § <i>Eutomoceras</i> , n. g., Hyatt, 1877                                          | 126     |
| <i>Eudiscoceras</i> , n. g., Hyatt, 1877                                           | 128     |

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HYATT, ALPHEUS. [Description of the new genus *Meekoceras*, and remarks on the different species of the same.] < Contributions to Invertebrate Paleontology No. 5, Triassic fossils of Southeastern Idaho, by C. A. White. Twelfth Ann. Rep. of the U. S. Geol. and Geogr. Surv. of the Terr., by F. V. Hayden. pp. 112-113, pls. xxxi-xxxii. Washington, 1883.

An author's edition of these contributions was published in 1880.

|                                                 | Page    |
|-------------------------------------------------|---------|
| <i>Meekoceras</i> , n. g., Hyatt, 1880          | 112     |
| <i>M. aplanatum</i> , n. s., White, 1880        | 113     |
| <i>M. nachbachianum</i> , n. s., White, 1880    | 114     |
| <i>M. gracilitatis</i> , n. s., White, 1880     | 113-116 |
| <i>Arcestes ? cirratus</i> , n. s., White, 1880 | 117     |

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HYATT, ALPHEUS. [Description of the new genus *Enclimatoceras*.] < On the Nautiloid-genus *Enclimatoceras* Hyatt, and a description of the type species. < On Mesozoic fossils, by C. A. White, Bull. U. S. Geol. Surv. No. 4. Vol. i, pp. 16-17 of No. 4, or pp. 104-105 of vol. i. Washington, 1884.

|                                            |         |
|--------------------------------------------|---------|
| <i>Enclimatoceras</i> , n. g., Hyatt, 1884 | 104-105 |
|--------------------------------------------|---------|

\* *κόρυς*, a helmet; *κέρας*, a horn.

† *γυμνός*, naked; *ῥῶτος*, back; *κέρας*, a horn.

‡ *ακροχορδών*, a wart; *κέρας*, a horn.

§ *εὐ* (augm. part.); *τομος*, sharp; *κέρας*, a horn.

|| *εὐ* (augm. part.); *δίσκος*, a quoit; *κέρας*, a horn.





## VIII.—THE WRITINGS OF JULES MARCOU.

### 1.

MARCOU, JULES. Sur la géologie des Montagnes Rocheuses, entre le Fort Smith (Arkansas) et Albuquerque (Nouveau Mexique). <Bull. Geol. Soc. France, 2d ser., vol. xi, pp. 156-160. Paris, 1854.

Mentions the existence, at Tucumcari, of the Jurassic formation, with *Gryphæa dilatata* and *Ostrea Marshii*.

### 2.

MARCOU, JULES. Résumé of a geological reconnaissance extending from Napoleon, at the junction of the Arkansas with the Mississippi, to the Pueblo de los Angeles, in California. <U. S. Pacific R. R. Expl., 1853-54, vol. iii, 8vo. Report of explorations for a railway route near the 35th parallel of latitude, from the Mississippi River to the Pacific Ocean, by Lieut. A. W. Whipple, Corps of Topographical Engineers, chap. vi, pp. 40-48. H. Doc. 129. [Washington, 1855.]

Mentions the occurrence of a number of fossils and employs for the first time the name *Gryphæa tucumcarii*.

### 3.

MARCOU, JULES. Résumé d'une section géologique des Montagnes Rochenses à San Pedro, sur la côte de l'Océan Pacifique. <Bull. Geol. Soc. France, 2d ser., vol. xi, pp. 474-478. Paris, 1855.

Mentions the occurrence of a *Gryphæa* at Laguna (New Mexico), and of Carboniferous fossils near the San Francisco Mountains (Arizona).

### 4.

MARCOU, JULES. Geological notes of a survey of the country comprised between Preston, Red River, and El Paso, Rio Grande del Norte. <U. S. Pacific R. R. Expl., vol. iv, 8vo. Report of explorations of a route for the Pacific Railroad, near the 32d parallel of latitude from the Red River to the Rio Grande, by Brevet Capt. John Pope, Corps of Topographical Engineers. Chap. xiii, pp. 125-128. H. Doc. 126. [Washington, 1855.]

Mentions the occurrence of a number of fossils.

### 5.

MARCOU, JULES. Résumé explicatif d'une carte géologique des États-Unis et des provinces anglaises de l'Amérique du Nord, avec un profil géologique allant de la vallée du Mississippi aux côtes du Pacifique, et une planche de fossiles. <Bull. Geol. Soc. France, 2d ser., vol. xii, pp. 813-936, pls. xx-xxi. Paris, 1855.

The occurrence of many fossils is mentioned in this paper.

*Gryphæa dilatata*, Sowerby, pl. xxi, figs. 1 a, b, and 2.

*G. dilatata* var. *tucumcarii*, Marcou, 1855, pl. xxi, fig. 3.

*Ostrea marshii*, Sowerby, pl. xxi, fig. 4.

*Gryphæa pitcheri*, Morton, pl. xxi, figs. 5 a, b, and 6.

## 6.

MARCOU, JULES. Notes géologiques sur le pays compris entre Preston, sur la rivière Rouge, et el Paso, sur le rio Grande del Norte. < Bull. Geol. Soc. France, 2d series, vol. xii, pp. 808-813. Paris, 1855.

In this paper the author mentions the occurrence of many fossils. The notes are made up from collections and observations brought back by Captain Pope, U. S. Top. Engrs., from his survey from the Red River to the Rio Grande, in 1854.

## 7.

MARCOU, JULES. Résumé and field-notes by Jules Marcou, geologist and mining engineer of the Expedition, with a translation by William P. Blake. < Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean, vol. iii, part. iv, pp. 121-164. Washington, 1856.

The occurrence of many fossils is mentioned in these field-notes, originally written in French.

## 8.

MARCOU, JULES. Résumé of a Geological reconnaissance extending from Napoleon, at the junction of the Arkansas with the Mississippi, to the Pueblo de los Angeles, in California. < Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean, vol. iii. Rep. of Lieut. A. W. Whipple, part iv, pp. 165-171. Washington, 1856.

This résumé is reprinted from the preliminary or first report of Lieutenant Whipple, in 8vo, chap. vi, p. 40, Reports of Pacific Railroad Surveys, House Doc. 129, Washington, 1855. A few notes are added.

|                                        | Page |
|----------------------------------------|------|
| <i>Gryphæa Pitcheri</i> , Morton ..... | 167  |
| <i>G. dilatata</i> , Sowerby .....     | 168  |
| <i>O. Marshii</i> , Sowerby .....      | 168  |

## 9.

MARCOU, JULES. Geology of North America, with two reports on the Prairies of Arkansas and Texas, the Rocky mountains of New Mexico, and the Sierra Nevada of California, originally made for the United States Government, pp. 1-144, pls. i-ix. Zurich, 1858.

## CONTENTS.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Page. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Introduction .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1-8   |
| Résumé of a geological reconnaissance extending from Napoleon, at the junction of the Arkansas with the Mississippi, to the pueblo de los Angeles in California. (Extract from Report of Exploration for a railway route, near the thirty-fifth parallel of latitude, from the Mississippi River to the Pacific Ocean, by Lieutenant, now Captain, A. W. Whipple. Corps of Topographical Engineers, chapter vi, page 40, &c. Washington, 1855. House of Representatives, Document No. 129) ..... | 9-25  |
| Geological notes of a survey of the country comprised between Preston, Red River, and El Paso, Rio Grande Del Norte. (Extract from Report of Exploration of a route for the Pacific Railroad, near the thirty-second parallel of latitude, from the Red River to the Rio Grande, by Brevet Capt. John Pope, Corps of Topographical Engineers, chapter xiii, Geological Report, p. 125, &c. Washington, 1855) .....                                                                               | 26-31 |
| Paleontology .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 32-56 |
| Geology of New Mexico .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 54-57 |
| On the geology of the United States and the British Provinces of North America. (Extract from Dr. A. Petermann's Geographischen Mittheilungen, Heft 6, in 4 <sup>to</sup> . Gotha, 1855) .....                                                                                                                                                                                                                                                                                                   | 58-70 |
| Sketch of a geological classification of the mountains of a part of North America. (Extract from the Annales des Mines, 5 <sup>me</sup> série, tome vii, page 329, &c. Paris, 1855) .....                                                                                                                                                                                                                                                                                                        | 71-80 |
| On the Gold of California. (Extract from the Bibliothèque Universelle de Genève, février, 1855) .....                                                                                                                                                                                                                                                                                                                                                                                            | 81-84 |

|                                                                                                                                                                                                                               |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Construction of the Geological map of the United States and the British Provinces;<br>Criticism of the American Journal of Science and Arts, conducted by Professors<br>B. Silliman, B. Silliman, jr., and James D. Dana..... | 85-98   |
| A synopsis of the history of the progress and discoveries of Geology in North America.....                                                                                                                                    | 99-121  |
| List of maps and memoirs on the Geology of North America.....                                                                                                                                                                 | 122-143 |
| Note.....                                                                                                                                                                                                                     | 144     |

PALEONTOLOGY.

FOSSILS OF THE TERTIARY ROCKS.

|                                                                                                  |       |
|--------------------------------------------------------------------------------------------------|-------|
| <i>Ostrea virginica</i> var. <i>californica</i> , Marcou, 1858, pl. v, figs. 2, 2 <i>a</i> ..... | 32-33 |
|--------------------------------------------------------------------------------------------------|-------|

FOSSILS OF THE CRETACEOUS ROCKS.

|                                                                                                 |       |
|-------------------------------------------------------------------------------------------------|-------|
| <i>Ptychodus whipplei</i> , n. s., Marcou, 1858, pl. i, figs. 4, 4 <i>a</i> .....               | 33    |
| <i>Ammonites shumardi</i> , n. s., Marcou, 1858, pl. i, figs. 1, 1 <i>a</i> .....               | 33-34 |
| <i>Ammonites belknapii</i> , n. s., Marcou, 1858, pl. ii, figs. 1 <i>a</i> , 1 <i>b</i> .....   | 34    |
| <i>Ammonites peruvianus</i> , de Buch., pl. v, figs. 1, 1 <i>a</i> , 1 <i>b</i> .....           | 34-35 |
| <i>Ammonites gibbonianus</i> , Lea, pl. ii, fig. 2 <i>a</i> , 2 <i>b</i> .....                  | 35    |
| <i>Ammonites novi-mexicana</i> , n. s., Marcou, 1858, pl. i, figs. 2, 2 <i>a</i> .....          | 35-36 |
| <i>Hamites fremonti</i> , n. s., Marcou, 1858, pl. i, fig. 3.....                               | 36    |
| <i>Inoceramus lerouxi</i> , n. s., Marcou, 1858, pl. ii, fig. 3.....                            | 36-37 |
| <i>Isocardia washita</i> , n. s., Marcou, 1858, pl. iii, figs. 2, 2 <i>a</i> , 2 <i>b</i> ..... | 37    |
| <i>Gryphæa sinuata</i> var. <i>americana</i> , Marcou, 1858, pl. iii, fig. 1.....               | 37-38 |
| <i>Gryphæa pitcheri</i> , Morton, pl. iv, figs. 5, 5 <i>a</i> , <i>b</i> , and 6.....           | 38-40 |
| <i>Holaster comanchesii</i> , n. s., Marcou, 1858, pl. iii, figs. 3, 3 <i>a</i> .....           | 40-41 |
| <i>Exogyra flabellata</i> , Goldf.....                                                          | 41-42 |
| <i>Catharca missouriata</i> , Mort.....                                                         | 42    |
| <i>Tellina occidentalis</i> , Mort.....                                                         | 42    |
| <i>Caprotina texana</i> , Roem.....                                                             | 42    |

FOSSILS OF THE JURASSIC ROCKS.

|                                                                                                           |       |
|-----------------------------------------------------------------------------------------------------------|-------|
| <i>Gryphæa dilatata</i> var. <i>tucumcarii</i> , Marcou, 1858, pl. iv, figs. 1, 1 <i>a</i> , 1, 2, 3..... | 43    |
| <i>Ostrea marshii</i> , Sow., pl. iv, fig. 4.....                                                         | 43-44 |

FOSSILS OF THE MOUNTAIN LIMESTONE OR LOWER CARBONIFEROUS ROCKS.

|                                                                                               |        |
|-----------------------------------------------------------------------------------------------|--------|
| <i>Orthoceras nova-mexicana</i> , n. s., Marcou, 1858, pl. vii, fig. 1.....                   | 44     |
| <i>Myalina apachei</i> , n. s., Marcou, 1858, pl. vii, figs. 6, 6 <i>a</i> .....              | 44-45  |
| <i>Productus delawarei</i> , n. s., Marcou, 1858, pl. v, fig. 3.....                          | 45     |
| <i>Productus cora</i> , d'Orb., pl. vi, figs. 4, 4 <i>a</i> .....                             | 45     |
| <i>Productus cora</i> var. <i>mogayoni</i> , Marcou, 1858, pl. vi, fig. 5.....                | 45-46  |
| <i>Productus semi-recticulatus</i> , Mart., pl. v, figs. 4, 4 <i>a</i> , pl. vi, fig. 6.....  | 46     |
| <i>Productus costatus</i> , Sow., pl. v, fig. 5.....                                          | 46-47  |
| <i>Productus percampi</i> , Sow., pl. vi, fig. 7.....                                         | 47     |
| <i>Productus scabriculus</i> , Mart., pl. v, figs. 6, 6 <i>a</i> .....                        | 47-48  |
| <i>Productus pyxidiformis</i> , de Kon., pl. vi, figs. 3, 3 <i>a</i> .....                    | 48     |
| <i>Productus pustulosus</i> , Phill., pl. vi, fig. 1.....                                     | 48     |
| <i>Productus punctatus</i> , Mart., pl. vi, fig. 2.....                                       | 48     |
| <i>Orthis pecosii</i> , n. s., Marcou, 1858, pl. vi, figs. 14, 14 <i>a</i> , <i>b</i> .....   | 48-49  |
| <i>Orthis crenistria</i> , Phill.....                                                         | 49     |
| <i>Spirifer striatus</i> , Mart., pl. vii, figs. 2, 2 <i>a</i> .....                          | 49     |
| <i>Spirifer striatus</i> var. <i>triplicatus</i> , Marcou, 1858, pl. vii, fig. 3.....         | 49, 50 |
| <i>Spirifer rocky-montani</i> , n. s., Marcou, 1858, pl. vii, figs. 4, 4 <i>a-e</i> .....     | 50     |
| <i>Spirifer lineatus</i> , Mart., pl. vii, figs. 5, 5 <i>a-c</i> .....                        | 50     |
| <i>Terebratula rocky-montana</i> , n. s., Marcou, 1858, pl. vi, figs. 13, 13 <i>a-c</i> ..... | 50-51  |
| <i>Terebratula mormonii</i> , n. s., Marcou, 1858, pl. vi, figs. 11, 11 <i>a-c</i> .....      | 51     |
| <i>Terebratula uta</i> , n. s., Marcou, 1858, pl. vi, figs. 12, 12 <i>a-c</i> .....           | 51     |
| <i>Terebratula royssii</i> , Léveillé, pl. vi, figs. 10, 10 <i>a, b</i> .....                 | 51-52  |
| <i>Terebratula plano-sulcata</i> , Phill., pl. vi, figs. 8, 8 <i>a-b</i> .....                | 52     |
| <i>Terebratula subtilita</i> , Hall, pl. vi, figs. 9, 9 <i>a-f</i> .....                      | 52     |
| <i>Zaphrentis stansburpi</i> , Hall, pl. vii, fig. 7.....                                     | 52-53  |
| <i>Zaphrentis cylindrica</i> , Milne-Edwards & Jules Haime, pl. vii, fig. 8.....              | 53     |
| <i>Amplexus coralloides?</i> Sow.....                                                         | 53     |



MARCOU, JULES. Report on the Geology of a portion of Southern California. <Annual Report upon the Geographical Surveys West of the One Hundredth Meridian, in California, Nevada, Utah, Colorado, Wyoming, New Mexico, Arizona, and Montana, by George M. Wheeler, First Lieutenant of Engineers, U. S. A., being Appendix J J of the Annual Report of the Chief of Engineers for 1876. Appendix H, pp. 158-172. Washington, 1876.

|                                                            | Page.   |
|------------------------------------------------------------|---------|
| Pliocene rocks of Los Angeles.....                         | 158-159 |
| The Sierra of Santa Monica .....                           | 159-160 |
| Sierra Madre, Pacoña or Pacorina Cañon .....               | 160-161 |
| Geology of the vicinity of the San Fernando Mission .....  | 161     |
| The San Fernando sierra.....                               | 161-164 |
| Asphaltum and mineral oil near San Francisquito ranch..... | 164-166 |
| Sierra Hebre and California desert .....                   | 166     |
| Cañada de las Uvas.....                                    | 166-167 |
| Tertiary rocks in the vicinity of Fort Tejon.....          | 167-169 |
| Tertiary rocks of California .....                         | 169     |
| Glacial rocks of Southern California and Pike's Peak ..... | 169-170 |
| Mountain chains and their ages .....                       | 170     |
| The Sierra Madre .....                                     | 170-171 |
| Coast Range .....                                          | 171-172 |
| Sierras of San Fernando and Santa Monica .....             | 172     |
| Hills of Los Angeles.....                                  | 172     |

The occurrence of many fossils is mentioned in this report.

## IX.—THE WRITINGS OF JOHN STRONG NEWBERRY.

1.

NEWBERRY, J. S. Paleontology. <Report upon the Colorado River of the West, by Lieut. Joseph C. Ives. Part iii, chapter xi, pp. 116-132, pls. i-iii. Washington, 1861.

|                                                                                     | Page.   |
|-------------------------------------------------------------------------------------|---------|
| FOSSIL PLANTS.                                                                      |         |
| <i>Cyclopteris</i> , Brong. ....                                                    | 129     |
| <i>C. moquensis</i> , n. s., Newberry, 1861, pl. xi, figs. 1, 2. ....               | 129-130 |
| <i>Pecopteris</i> , Brong. ....                                                     | 130     |
| <i>P. cycloloba</i> , n. s., Newberry, 1861, pl. iii, figs. 3, 4, 4 <i>a</i> . .... | 130-131 |
| <i>Neuropteris</i> , Brong. ....                                                    | 131     |
| <i>N. angulata</i> , n. s., Newberry, 1861, pl. iii, fig. 5. ....                   | 131     |
| <i>Sphenopteris</i> , Brong. ....                                                   | 131     |
| Subspecies, Newberry, 1861. ....                                                    | 131     |
| <i>Phyllites</i> , Sterub. ....                                                     | 131     |
| <i>P. venosissimus</i> , n. s., Newberry, 1861, pl. iii, fig. 6. ....               | 131     |
| <i>P. coriaceous</i> , n. s., Newberry, 1861, pl. iii, figs. 7, 7 <i>a</i> . ....   | 132     |
| <i>Clathropteris</i> , Brong. ....                                                  | 132     |

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NEWBERRY, J. S. Descriptions of the Carboniferous and Triassic Fossils collected on the San Juan Exploring Expedition under Capt. J. N. Macomb, U. S. Engineers. <Rep. Expl. Exp. from Santa Fé, New Mexico, to the junction of the Grand and Green rivers of the Great Colorado of the West in 1859, under the command of Capt. J. N. Macomb, 135-148, pls. iii-viii. Washington, 1876.

|                                                                                                              | Page.   |
|--------------------------------------------------------------------------------------------------------------|---------|
| <i>Deltodus mercurei</i> , n. s., Newberry, 1876, pl. iii, figs. 1, 1 <i>a</i> . ....                        | 137     |
| <i>Ptychodus whipplei</i> , Marcou, pl. iii, figs. 2, 2 <i>a-f</i> . ....                                    | 137-138 |
| <i>Athyris subtilita</i> , Hall, sp. ....                                                                    | 138     |
| <i>Spirifer cameratus</i> , Morton. ....                                                                     | 138     |
| <i>Spirifer</i> ( <i>Trigonotreta</i> ?) <i>texanus</i> , Meek, 1871, pl. iii, figs. 5, 5 <i>a, b</i> . .... | 139-140 |
| <i>Productus nodosus</i> , Newberry, pl. iii, figs. 3, 3 <i>d</i> . ....                                     | 140     |
| <i>Pleurotomaria excelsa</i> , n. s., Newberry, 1876, pl. iii, figs. 4, 4 <i>a</i> . ....                    | 140-141 |
| <i>Lamna texana</i> , Reimer. ....                                                                           | 141     |
| <i>Oxyrhina mantelli</i> , Agass. ....                                                                       | 141     |
| <i>Otozamites macombi</i> , n. s., Newberry, 1876, pl. iv, figs. 1, 2, pl. vi, figs. 5, 5 <i>a</i> . ....    | 141-142 |
| <i>Zamites occidentalis</i> , n. s., Newberry, 1876, pl. v, figs. 1, 1 <i>a</i> , and 2. ....                | 142-143 |
| <i>Pecopteris bullatus</i> , Bunbury, pl. vi, figs. 1, 1 <i>a</i> . ....                                     | 143     |
| <i>Pecopteris mexicana</i> , n. s., Newberry, 1876, pl. vi, figs. 2, 2 <i>a</i> . ....                       | 143-144 |
| <i>Pecopteris falcatus</i> , Emmons, pl. vi, fig. 3. ....                                                    | 144     |
| <i>Pterophyllum fragile</i> , n. s., 1876, Newberry, pl. vi, figs. 6, 6 <i>a</i> . ....                      | 144     |
| <i>Pterophyllum robustum</i> , n. s., Newberry, 1876, pl. vi, fig. 7. ....                                   | 145     |
| <i>Podozamites crassifolia</i> , n. s., Newberry, 1876, pl. vi, fig. 10. ....                                | 145     |
| <i>Alethopteris whitnei</i> , n. s., Newberry, 1876, pl. vii, figs. 1, 1 <i>a, b</i> . ....                  | 145-146 |
| <i>Camptopteris remondi</i> , n. s., Newberry, 1876, pl. vii, figs. 2, 2 <i>a</i> . ....                     | 146-147 |
| <i>Tæniopteris elegans</i> , n. s., Newberry, 1876, pl. viii, fig. 1. ....                                   | 147     |
| <i>Tæniopteris glassopteroides</i> , n. s., Newberry, 1876, pl. viii, figs. 2, 2 <i>a</i> . ....             | 147     |
| <i>Tæniopteris magnifolia</i> , Rogers, pl. viii, figs. 3, 4. ....                                           | 147-148 |
| <i>Jeanpaulia radiata</i> , n. s., Newberry, 1876, pl. viii, fig. 6. ....                                    | 148     |

## X.—THE WRITINGS OF DAVID DALE OWEN.

### 1.

OWEN, D. D. Description of some organic remains figured in this work, supposed to be new. <Rep. Geol. Expl. of part of Iowa, Wisconsin, and Illinois, by David Dale Owen. Appendix, pp. 69-86, pls. xi-xviii and p. 33, pl. vii. Washington, 1844.

|                                                       | Page. |
|-------------------------------------------------------|-------|
| <i>Catenipora escharoides</i> , pl. vii, fig. 2 ..... | 33    |
| <i>Pentamerus oblongus</i> , pl. vii, fig. 3 .....    | 33    |
| <i>Pentamerus lauspodus</i> , pl. vii, fig. 3 .....   | 33    |

### APPENDIX.

|                                                                                                    |    |
|----------------------------------------------------------------------------------------------------|----|
| <i>Cyathopora iowensis</i> , n. s., D. D. Owen, 1844, pl. xi .....                                 | 69 |
| <i>Orthoceras undulatum</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 6 .....                       | 69 |
| <i>Gyroceras cornutes</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 8 .....                         | 69 |
| <i>Delthyris euruteines</i> , n. s., D. D. Owen, 1844, pl. xii, fig. 9 .....                       | 69 |
| <i>Anthophyllum expansum</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 3 .....                     | 69 |
| <i>Lunulites? dactioloides</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 4 .....                   | 69 |
| <i>Cyathophyllum caliculare</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 5 .....                  | 69 |
| <i>Cyathophyllum corinthium</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 6 .....                  | 69 |
| <i>Cyathophyllum undulatum et multiplicatum</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 10 ..... | 69 |
| <i>Sarcinula (Porites?) glabra</i> , n. s., D. D. Owen, 1844, pl. xiii, fig. 11 .....              | 70 |
| <i>Lamellopora</i> .....                                                                           | 70 |
| <i>L. infundibularia</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 1 .....                          | 70 |
| <i>Astrea mamillaris</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 3 .....                          | 70 |
| <i>Astrea? gigas</i> , n. s., D. D. Owen, 1844, pl. xiv, fig. 7 .....                              | 70 |
| <i>Lingula iowensis</i> , n. s., D. D. Owen, 1844, pl. xv, fig. 1 .....                            | 70 |
| <i>Orthoceras marginale</i> , n. s., D. D. Owen, 1844, pl. xvi, fig. 6 .....                       | 70 |
| <i>Cyrtoceras conicum</i> , n. s., D. D. Owen, 1844, pl. xvi, fig. 9 .....                         | 70 |
| <i>Strophomena convexa</i> , n. s., D. D. Owen, 1844, pl. xvii, fig. 2 .....                       | 70 |
| <i>Orbitulites? reticulata</i> , n. s., D. D. Owen, 1844, pl. xviii, fig. 7 .....                  | 70 |
| <i>Atrypa limitaris?</i> Vanuxem, pl. xii, fig. 1 .....                                            | 74 |
| <i>Atrypa prisca</i> , Hengervien, pl. xii, fig. 2 .....                                           | 74 |
| <i>Calymene? bife</i> , Green, pl. xii, fig. 3 .....                                               | 74 |
| <i>Atrypa? —</i> , pl. xii, fig. 4 .....                                                           | 74 |
| <i>Delthyris? —</i> , pl. xii, fig. 5 .....                                                        | 74 |
| <i>Favosites polymorpha ramosa</i> , Goldfuss, pl. xii, fig. 7 .....                               | 74 |
| <i>Atrypa prisca —</i> , pl. xii, fig. 10 .....                                                    | 74 |
| <i>Bellerophon —</i> , pl. xii, fig. 11 .....                                                      | 74 |
| <i>Nucula? —</i> , pl. xii, fig. 12 .....                                                          | 74 |
| <i>Favosites polymorpha</i> , Goldfuss, pl. xii, fig. 13 .....                                     | 74 |
| <i>Cyathophyllum helianthoides</i> , Goldfuss, pl. xiii, fig. 1 .....                              | 76 |
| <i>Syringopora (lineata?) —</i> , pl. xiii, fig. 2 .....                                           | 76 |
| <i>Favosites maxima?</i> Troost, pl. xiii, fig. 7 .....                                            | 76 |
| <i>Porites? astriformis</i> , Owen, pl. xiii, fig. 8 .....                                         | 76 |
| <i>Phragmoceras ventricosum?</i> —, pl. xiii, fig. 9 .....                                         | 76 |
| <i>Autopora serpens</i> , Goldfuss, pl. xiv, fig. 2 .....                                          | 78 |
| <i>Syphonia piriformis?</i> Goldfuss, pl. xiv, fig. 4 .....                                        | 78 |
| <i>Nucula minuta</i> , Owen, pl. xiv, fig. 5 .....                                                 | 78 |
| <i>Cyathophyllum turbinatum?</i> Goldfuss, pl. xiv, fig. 6 .....                                   | 78 |
| <i>Cyathophyllum vesiculosum?</i> Goldfuss, pl. xiv, fig. 8 .....                                  | 78 |
| <i>Orthis</i> , pl. xiv, fig. 9 .....                                                              | 78 |
| <i>Pentamerus oblongus?</i> pl. xiv, fig. 10 .....                                                 | 78 |
| <i>Astrea fungiformis</i> , pl. xiv, fig. 11 .....                                                 | 78 |
| <i>Sarcinula costata</i> , Goldfuss, pl. xiv, fig. 12 .....                                        | 78 |
| <i>Tubipora lamellosa</i> , n. s., Owen, 1844, pl. xiv, fig. 13 .....                              | 78 |
| <i>Lingula iowensis</i> , pl. xv, fig. 1 .....                                                     | 80 |



|                                                                                         | Page. |
|-----------------------------------------------------------------------------------------|-------|
| <i>Rellerophon</i> (cast), pl. xv, fig. 2 .....                                         | 80    |
| <i>Orthis</i> (cast), pl. xv, fig. 3 .....                                              | 80    |
| <i>Pleurotomaria</i> ? (cast), pl. xv, fig. 4 .....                                     | 80    |
| <i>Trochus lenticularis</i> ? (cast), pl. xv, fig. 5 .....                              | 80    |
| <i>Pleurotomaria</i> (cast), pl. xv, fig. 6 .....                                       | 80    |
| <i>Deltocypris</i> (cast), pl. xv, fig. 7 .....                                         | 80    |
| <i>Euomphalus</i> (cast), pl. xv, fig. 8 .....                                          | 80    |
| <i>Atrypa orbicularis</i> (cast), pl. xv, fig. 9 .....                                  | 80    |
| <i>Pleurotomaria</i> (cast), pl. xv, fig. 10 .....                                      | 80    |
| <i>Orthis</i> (cast), pl. xv, fig. 11 .....                                             | 80    |
| <i>Rellerophon</i> (cast), pl. xv, fig. 12 .....                                        | 80    |
| <i>Illanus-Trentonensis</i> ? pl. xvi, fig. 1 .....                                     | 82    |
| Casts of <i>Strophomena</i> , pl. xvi, fig. 2 .....                                     | 82    |
| Casts of <i>Strophomena</i> , <i>Orthis</i> ? and <i>Atrypa</i> , pl. xvi, fig. 4 ..... | 82    |
| <i>Cyathophyllum profundum</i> , Con., pl. xvi, fig. 5 .....                            | 82    |
| <i>Pleurotomaria</i> ? pl. xvi, fig. 7 .....                                            | 82    |
| Siliceous casts of <i>Strophomena deltoidea</i> , pl. xvi, fig. 8 .....                 | 82    |
| <i>Orthis</i> , pl. xvii, fig. 1 .....                                                  | 84    |
| <i>Pleurotomaria</i> , pl. xvii, fig. 2 .....                                           | 84    |
| <i>Atrypa</i> , pl. xvii, fig. 4 .....                                                  | 84    |
| <i>Strophomena sericea</i> ? pl. xvii, fig. 5 .....                                     | 84    |
| <i>Strophomena</i> , pl. xvii, fig. 6 .....                                             | 84    |
| <i>Pleurotomaria</i> , pl. xvii, fig. 7 .....                                           | 84    |
| <i>Cardium iowensis</i> , n. s., Owen, 1844, pl. xvii, fig. 8 .....                     | 84    |
| <i>Thaleops</i> ? pl. xvii, fig. 9 .....                                                | 84    |
| <i>Strophomena nasuta</i> ? pl. xvii, fig. 10 .....                                     | 84    |
| <i>Cerataria</i> , pl. xvii, fig. 11 .....                                              | 84    |
| <i>Cypricardites</i> , pl. xvii, fig. 12 .....                                          | 84    |
| <i>Pleurotomaria</i> , pl. xvii, fig. 13 .....                                          | 84    |
| <i>Deltocypris expansus</i> , pl. xvii, fig. 14 .....                                   | 84    |
| <i>Bellerophon bilobatus</i> , pl. xvii, fig. 15 .....                                  | 84    |
| <i>Strophomena</i> , pl. xviii, fig. 1 .....                                            | 86    |
| <i>Asaphus</i> , pl. xviii, fig. 2 .....                                                | 86    |
| <i>Strophomena angulata</i> ? pl. xviii, fig. 3 .....                                   | 86    |
| <i>Pleurotomaria</i> ? pl. xviii, fig. 4 .....                                          | 86    |
| <i>Pleurotomaria angulata</i> ? pl. xviii, fig. 5 .....                                 | 86    |
| <i>Pleurotomaria lenticularis</i> , pl. xviii, fig. 6 .....                             | 86    |
| <i>Trochus</i> ? pl. xviii, fig. 7 .....                                                | 86    |
| <i>Orthoceras</i> , pl. xviii, fig. 9 .....                                             | 86    |
| <i>Phragmoceras</i> ? pl. xviii, fig. 11 .....                                          | 86    |

## 2.

OWEN, D. D. On the Geology of the Western States of North America. <Quart. Journ. Geol. Soc., London. Vol. ii, pp. 433-447, pl. xix. London, 1846.

This article, of which an abstract was given in the Proc. Geol. Soc., London., vol. iv, p. 1, contains many paleontological notes.

|                                                       | Page. |
|-------------------------------------------------------|-------|
| <i>Pentremites pyriformis</i> , Say .....             | 437   |
| <i>Archimedes</i> , Lesueur .....                     | 437   |
| <i>Retepora archimedes</i> .....                      | 437   |
| <i>Aulopora tubiformis</i> .....                      | 442   |
| <i>Retepora reticulosus</i> , n. s., Owen, 1846 ..... | 442   |

## 3.

OWEN, D. D. [Lists of fossils found.] <Rep. of a Geol. Recon. of the Chippewa land district of Wisconsin. 30th Congress, 1st session, Senate, Executive Doc. No. 57. Appendix, pp. 131-133. Washington, 1848.

|                                                                                                      | Page. |
|------------------------------------------------------------------------------------------------------|-------|
| List of fossil genera found in the lower sandstones of Wisconsin, fig. 1, species undetermined ..... | 131   |
| List of fossil genera found in the lower magnesian limestone, fig. 2, species undetermined .....     | 131   |

\* Page.

|                                                                                                                                                                                                        |     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| List of fossil genera and species found in the lower fossiliferous limestone at St. Peter's and Fort Snelling, which are identical with those occurring in the blue limestone of the Ohio Valley ..... | 132 |
| List of organic remains found near the "Big Spring," on the Upper Iowa River. ....                                                                                                                     | 132 |
| List of organic remains found in the limestones (fig. 3) of Turkey River, near the agency and the vicinity.....                                                                                        | 133 |

4.

OWEN, D. D., and SHUMARD, B. F. Descriptions of fifteen new species of Crinoidea from the subcarboniferous limestone of Iowa, collected during the U. S. Geological Survey of Iowa, Wisconsin, and Minnesota, in the years 1848-49. <Journ. Acad. Nat. Sci., Philadelphia. Second series, vol. ii, part i, pp. 57-70, pl., vii. Philadelphia, 1850.

This article was afterward republished in Owen's U. S. Geol. Rep. of Iowa, Wisconsin, and Minnesota.

|                                                                                           | Page. |
|-------------------------------------------------------------------------------------------|-------|
| <i>Paterulus</i> Miller .....                                                             | 57    |
| <i>P. planus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 4 a-c .....                | 57-58 |
| <i>P. yandellii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 6 a, b .....            | 58    |
| <i>P. discoides</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 1 a, b .....            | 58-59 |
| <i>P. corrugatus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 2 a-c .....            | 59-60 |
| <i>P. burlingtonensis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 5 .....            | 60-61 |
| <i>Dichocrinus</i> Munster .....                                                          | 61    |
| <i>D. oratus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 9 a, b .....               | 61-62 |
| <i>D. striatus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 10 a, b .....            | 62-63 |
| <i>Crinoides</i> Miller .....                                                             | 63    |
| <i>C. iowensis</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 11 a-c .....             | 63    |
| <i>C. cornutus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 8 a, b .....             | 63-64 |
| <i>Pterocrinus</i> Sphenocrinus .....                                                     | 64    |
| <i>P. norwoodii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 13 a-c .....            | 64-65 |
| <i>P. laterniformis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 15 .....             | 65-66 |
| <i>P. stelliformis</i> , n. s., Owen & Shumard, 1850, pl. vii, fig. 16 a, b .....         | 66    |
| <i>Actinocrinus unicornus</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 12 a, b ..... | 67-68 |
| <i>Actinocrinus evansii</i> , n. s., Owen & Shumard, 1850, pl. vii, figs. 3 a, b .....    | 68-69 |

5

OWEN, D. D., and SHUMARD, B. F. On the Number and Distribution of Fossil Species in the Palaeozoic Rocks of Iowa, Wisconsin, and Minnesota. <Proc. Amer. Ass. Adv. Sci., fifth meeting, 1851. pp. 235-239. Washington and Cincinnati, 1851.

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This article was afterward republished in Owen's U. S. Geol. Rep. of Wisconsin, Iowa, and Minnesota.

|                                                                                          | Page. |
|------------------------------------------------------------------------------------------|-------|
| <i>Paterulus</i> Miller .....                                                            | 89    |
| <i>P. americanus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 1 a, b .....           | 89    |
| <i>Pterocrinus</i> Miller .....                                                          | 90    |
| <i>P. rhombiferus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 2 a-c .....           | 89-90 |
| <i>P. tumidus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 3 a, b .....              | 90-91 |
| <i>P. spinosus</i> , n. s., Owen & Shumard, 1852, pl. xi, fig. 4 .....                   | 91-92 |
| <i>P. occidentalis</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 5 a, b .....         | 92-93 |
| <i>Agassizocrinus</i> , Troost in MSS .....                                              | 93    |
| <i>A. conicus</i> , n. s., Owen & Shumard, 1852, pl. xi, fig. 6 .....                    | 93    |
| <i>Synbathocrinus dentatus</i> , n. s., Owen & Shumard, 1852, pl. xi, figs. 7 a, b ..... | 93-94 |

OWEN, D. D. Description of new and imperfectly known Genera and Species of Organic Remains, collected during the geological surveys of Wisconsin, Iowa and Minnesota. < Rep. Geol. Surv. of Wisconsin, Iowa, and Minnesota, and incidentally of a part of Nebraska Territory, by David Dale Owen. Appendix, Article I, pp. 573-587, pls. i-ii, ii-iii, iii-iiii, iv-v, vii-viii. Philadelphia, 1852.

## Crustacea (Trilobites).

Page.

|                                                                                                                                   |         |
|-----------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Dike(l)cephalus</i> , n. g., D. D. Owen, 1852 .....                                                                            | 573-574 |
| <i>D. minnesotensis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 1, 2, 10; tab. i A, figs. 3, 6 .....                             | 574     |
| <i>D. pepinensis</i> , n. s., D. D. Owen, 1852, tab. i, fig. 9 <i>a</i> , <i>b</i> , fig. 13 (?) and tab. i, A, fig. 17 (?) ..... | 574     |
| <i>D. miniscensis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 3, 12, and tab. i A, figs. 4, 5 .....                              | 574-575 |
| <i>D. iowensis</i> , n. s., D. D. Owen, 1852, tab. i, fig. 4, and tab. i A, fig. 13 .....                                         | 575     |
| <i>D. granulatus</i> , n. s., D. D. Owen, 1852, tab. i, figs. 7 (and 5?) .....                                                    | 575     |
| <i>Lonchocephalus</i> , n. g., D. D. Owen, 1852, tab. i A, fig. 12 .....                                                          | 575     |
| <i>L. chippewaensis</i> , n. s., D. D. Owen, 1852, tab. i, figs. 6, 14; tab. i A, fig. 9 .....                                    | 576     |
| <i>L. hamulus</i> , n. s., D. D. Owen, 1852, tab. i A, figs. 8-12 .....                                                           | 576     |
| <i>Cropicephalus</i> , n. g., D. D. Owen, 1852 .....                                                                              | 576-577 |
| <i>Menocephalus</i> , n. g., D. D. Owen, 1852, tab. i, fig. 11 .....                                                              | 577     |
| <i>Asaphus (Isotelus) iowensis</i> , D. D. Owen, 1852, tab. ii A, figs. 1-7 .....                                                 | 577     |

## Cephalopoda

|                                                                                                           |         |
|-----------------------------------------------------------------------------------------------------------|---------|
| <i>Ammonites nebrascensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 3, and tab. viii A, fig. 2 ..... | 577-578 |
| <i>Ammonites nebrascensis (?)</i> D. D. Owen, 1852, tab. viii, fig. 2 .....                               | 578     |
| <i>Ammonites cheyennensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 2 .....                           | 578-579 |
| <i>Ammonites opalus</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 6 .....                                | 579     |
| <i>Ammonites moreauensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 7 .....                           | 579     |
| <i>Ammonites lenticularis</i> , D. D. Owen, tab. viii, fig. 5 .....                                       | 579     |
| <i>Scaphites</i> of Parkinson .....                                                                       | 579-580 |
| <i>S. (Ammonites?) comprinus</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 4 .....                        | 580     |
| <i>S. (Ammonites?) nodosus</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 4 .....                         | 581     |
| <i>Gyroceras burlingtonensis</i> , n. s., D. D. Owen, 1852, tab. v, fig. 10 .....                         | 581     |
| <i>Discites tuberculatus</i> , n. s., D. D. Owen, 1852, tab. v, fig. 14 .....                             | 581     |

## Gastropoda

|                                                                                                       |     |
|-------------------------------------------------------------------------------------------------------|-----|
| <i>Pleurotomaria muralis</i> , n. s., D. D. Owen, 1852, tab. ii, fig. 6 .....                         | 581 |
| <i>Straparollus (Euomphalus) minnesotensis</i> , n. s., D. D. Owen, 1852, tab. ii, figs. 12, 13 ..... | 581 |

## Conchifera

|                                                                                            |     |
|--------------------------------------------------------------------------------------------|-----|
| <i>Inoceramus sagensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 3 .....               | 582 |
| <i>Inoceramus nebrascensis</i> , n. s., D. D. Owen, 1852, tab. viii, fig. 1 .....          | 582 |
| <i>Cucullæa nebrascensis</i> , n. s., D. D. Owen, 1852, tab. vii, fig. 1, 1 <i>a</i> ..... | 582 |

## Brachiopoda

|                                                                                                           |     |
|-----------------------------------------------------------------------------------------------------------|-----|
| <i>Lingula pinnaformis</i> , n. s., D. D. Owen, 1852, tab. i B, figs. 4, 6, 8 .....                       | 583 |
| <i>Lingula ampla</i> , n. s., D. D. Owen, 1852, tab. i B, fig. 5 .....                                    | 583 |
| <i>Orbicula prima</i> , n. s., D. D. Owen, 1852, tab. i B, figs. 17, 19, and top figures on tab. iv ..... | 583 |
| <i>Atrypa comis</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 4 .....                                   | 583 |
| <i>Chonetes granulifera</i> , n. s., D. D. Owen, 1852, tab. v, fig. 12 .....                              | 583 |
| <i>Chonetes (?) iowensis</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 7 .....                          | 584 |
| <i>Productus nebrascensis</i> , n. s., D. D. Owen, 1852, tab. v, fig. 3 .....                             | 584 |
| <i>Leptæna trilobata</i> , n. s., D. D. Owen, 1852, tab. ii, figs. 17, 18 .....                           | 584 |
| <i>Strophodonta</i> , Hall .....                                                                          | 584 |
| <i>S. parva</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 9 .....                                       | 584 |
| <i>S. (?) costata</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 5 .....                                 | 585 |
| <i>S. iowensis</i> , n. s., D. D. Owen, 1852 .....                                                        | 585 |
| <i>Orthis emcata</i> , n. s., D. D. Owen, 1852, tab. iii A, fig. 10 .....                                 | 585 |
| <i>Spirifer iowensis</i> , n. s., D. D. Owen, 1852, tab. iii, fig. 1 .....                                | 585 |
| <i>Spirifer pennatus</i> , n. s., D. D. Owen, 1852, tab. iii, figs. 3 and 8 (?) .....                     | 585 |
| <i>Spirifer ligus</i> , n. s., D. D. Owen, 1852, tab. iii, fig. 4 .....                                   | 585 |
| <i>Spirifer euruteines</i> , D. D. Owen, tab. iii, figs. 2, 2 <i>a</i> , and 6, 6 <i>a</i> .....          | 586 |
| <i>Spirifer edarensis</i> , D. D. Owen, 1852, tab. iii, fig. 5 .....                                      | 586 |
| <i>Spirifer inequicostatus</i> , n. s., D. D. Owen, 1852, tab. v, fig. 6 .....                            | 586 |

## Foraminifera

|                                                                                      |     |
|--------------------------------------------------------------------------------------|-----|
| <i>Selenoides</i> , n. g., D. D. Owen, 1852, fig. 3, <i>a</i> (and <i>b</i> ?) ..... | 586 |
| <i>S. iowensis</i> , n. s., D. D. Owen, 1852, tab. ii B, fig. 13 .....               | 587 |

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|                                                                                            | Page.   |
|--------------------------------------------------------------------------------------------|---------|
| <i>Platycrinus</i> , Miller .....                                                          | 587     |
| <i>P. planus</i> , Owen & Shumard, 1850, tab. v A, figs. 4 <i>a-c</i> .....                | 587     |
| <i>P. yandellii</i> , Owen & Shumard, 1850, tab. v A, figs. 6 <i>a, b</i> .....            | 587-588 |
| <i>P. discoideus</i> , Owen & Shumard, 1850, tab. v A, figs. 1 <i>a, b</i> .....           | 588     |
| <i>P. corrugatus</i> , Owen & Shumard, 1850, tab. v A, figs. 2 <i>a-c</i> .....            | 589     |
| <i>P. burlingtonensis</i> , Owen & Shumard, 1850, tab. v A, fig. 5 .....                   | 589     |
| <i>Dichocrinus</i> , Munster .....                                                         | 589-590 |
| <i>D. ovatus</i> , Owen & Shumard, 1850, tab. v A, figs. 9 <i>a, b</i> .....               | 590     |
| <i>D. striatus</i> , Owen & Shumard, 1850, tab. v A, figs. 10 <i>a, b</i> .....            | 590     |
| <i>Cyathocrinus</i> , Miller .....                                                         | 591     |
| <i>C. iowensis</i> , Owen & Shumard, 1850, tab. v A, figs. 11 <i>a-c</i> .....             | 591     |
| <i>C. cornutus</i> , Owen & Shumard, 1850, tab. v A, figs. 8 <i>a, b</i> .....             | 591     |
| <i>Pentremites</i> , Say .....                                                             | 591     |
| <i>P. norwoodii</i> , Owen & Shumard, 1850, tab. v A, figs. 13 <i>a-c</i> .....            | 591-592 |
| <i>P. melo</i> , Owen & Shumard, 1850, tab. v A, figs. 14 <i>a-c</i> .....                 | 592     |
| <i>P. laterniformis</i> , Owen & Shumard, 1850, tab. v A, fig. 15 .....                    | 592-593 |
| <i>P. stelliformis</i> , Owen & Shumard, 1850, tab. v A, figs. 16 <i>a, b</i> .....        | 593     |
| <i>Actinocrinus unicornus</i> , Owen & Shumard, 1850, tab. v A, figs. 12 <i>a, b</i> ..... | 593-594 |
| <i>Megistocrinus</i> , n. g., Owen & Shumard, 1852 .....                                   | 594     |
| <i>M. evansii</i> , n. s., Owen & Shumard, 1852, tab. v A, figs. 3 <i>a, b</i> .....       | 594     |
| <i>Platycrinus</i> , Miller .....                                                          | 594     |
| <i>P. americanus</i> , Owen & Shumard, 1852, tab. v B, figs. 1 <i>a, b</i> .....           | 594-595 |
| <i>Poteriocrinus</i> , Miller .....                                                        | 595     |
| <i>P. rhombiferus</i> , Owen & Shumard, 1852, tab. v B, figs. 2 <i>a-c</i> .....           | 595     |
| <i>P. tumidus</i> , Owen & Shumard, 1852, tab. v B, figs. 3 <i>a, b</i> .....              | 595-596 |
| <i>P. spinosus</i> , Owen & Shumard, 1852, tab. v B, fig. 4 .....                          | 596     |
| <i>P. occidentalis</i> , Owen & Shumard, 1852, tab. v B, figs. 5 <i>a, b</i> .....         | 596-597 |
| <i>Agassizocrinus</i> (Troost in MSS) .....                                                | 597     |
| <i>A. conicus</i> , Owen & Shumard, 1852, tab. v B, fig. 6 .....                           | 597     |
| <i>Synbathocrinus dentatus</i> , Owen & Shumard, 1852, tab. v B, figs. 7 <i>a, b</i> ..... | 597-598 |

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OWEN, D. D. Shumard, B. F. Summary of the distribution of Orders, Genera, and Species, in the Northwest. < Rep. Geol. Surv. of Wisconsin, Iowa, and Minnesota, and incidentally of a part of Nebraska Territory, by David Dale Owen. Appendix. Article III, pp. 598-600. Philadelphia, 1852.

Modified by additions and researches since the publication in the Proc. of the American Association, 1851.





## XI.—THE WRITINGS OF JAMES SCHIEL.

**SCHIEL, JAMES.** List and Description of Organic Remains collected during the Exploration of the Central Pacific Railroad line, 1853-'54. <Rep. Expls. and Survs. from the Mississippi River to the Pacific Ocean. Report of Expls. for a route for the Pacific Railroad of the line of the forty-first parallel of north latitude, by Lieut. E. G. Beckwith, 1854. Vol. ii, chap. x, pp. 108-109, pls. i-iv. Washington, 1855.

|                                                                       | Page. |
|-----------------------------------------------------------------------|-------|
| <i>Forrestella</i> , pl. i, fig. 1 .....                              | 108   |
| <i>Brachiopoda.</i>                                                   |       |
| <i>Terebratula subtilita</i> , Hall, pl. i, figs. 2 <i>a, b</i> ..... | 108   |
| <i>Productus splendens</i> , Norwood & Prather, pl. i, fig. 3 .....   | 108   |
| <i>Productus æquicostatus</i> , Shumard, pl. ii, figs. 4, 5 .....     | 108   |
| <i>Spirifer</i> , pl. i, fig. 5 .....                                 | 108   |
| <i>Inoceramus</i> , pl. i, fig. 6 .....                               | 108   |
| <i>Inoceramus confertim-annulatus</i> , Römer, pl. ii, fig. 7 .....   | 108   |
| <i>Inoceramus pseudo-mytiloides</i> , pl. iii, fig. 8 .....           | 108   |
| <i>Gryphæa pitcheri</i> , Morton, pl. iii, fig. 9 .....               | 108   |
| <i>Cardium multistriatum</i> , Shumard, pl. i, fig. 10 .....          | 109   |
| <i>Phillipsia</i> ——— <i>l</i> , pl. i, figs. 11-14 .....             | 109   |
| <i>Encrinites and bryozoa</i> , pl. i, fig. 12 .....                  | 109   |
| <i>Ammonites</i> .....                                                | 109   |
| <i>Gryphæa pitcheri</i> .....                                         | 109   |



## XII.—THE WRITINGS OF BENJAMIN F. SHUMARD.

### 1.

SHUMARD, B. F. Description of the species of Carboniferous and Cretaceous fossils collected. <Expl. of the Red River of Louisiana, by Randolph B. Marcy, assisted by George B. McClellan. Appendix E, Paleontology, pp. 197–211, pls. i–vi. Washington, 1853.

#### FOSSILS OF THE CARBONIFEROUS SYSTEM.

|                                                                              | Page.   |
|------------------------------------------------------------------------------|---------|
| <i>Crinoidea.</i>                                                            |         |
| <i>Cyathocrinus granuliferus</i> , Yandell & Shumard, MSS., pl. —, fig. —    | 199     |
| <i>Agassizocrinus dactyliformis</i> , Troost, MSS., pl. i, fig. 7            | 199–209 |
| <i>Pentremites florealis</i> , Say, 1820                                     | 200     |
| <i>Pentremites sulcatus</i> , F. Roemer, 1852                                | 200     |
| <i>Bryozoa.</i>                                                              |         |
| <i>Archimediopora archimedes</i> , Lesueur, 1842, pl. i, fig. 6              | 201     |
| <i>Brachiopoda.</i>                                                          |         |
| <i>Productus punctatus</i> , Martin, pl. i, fig. 5 and pl. ii, fig. 1        | 201     |
| <i>Productus cora</i> , D'Orbigny, 1842                                      | 202     |
| <i>Productus costatus</i> , Sowerby, pl. i, fig. 2                           | 202     |
| <i>Terebratula subtilita</i> , Hall, pl. iv, fig. 8                          | 202–203 |
| <i>Terebratula marcyi</i> , Shumard, n. s., 1853, pl. i, figs. 4 <i>a, b</i> | 203     |
| <i>Spirifer</i> — ? Shumard, 1853, pl. i, fig. 3                             | 203     |

#### FOSSILS OF THE CRETACEOUS PERIOD.

|                                                                                   |          |
|-----------------------------------------------------------------------------------|----------|
| <i>Mollusca.</i>                                                                  |          |
| <i>Pecten quadricostatus</i> , Sowerby, pl. iii, fig. 6; pl. —, fig. —            | 204      |
| <i>Exogyra ponderosa</i> , Roemer, 1849                                           | 205      |
| <i>Gryphæa pitchei</i> , Morton, pl. vi, fig. 5                                   | 205      |
| <i>Exogyra texana</i> , Roemer, pl. v, figs. 1 <i>a, b</i> and fig. 5             | 205      |
| <i>Ostrea subovata</i> , n. s., Shumard, 1853, pl. v, fig. 2                      | 205, 206 |
| <i>Inoceramus confertim-annulatus</i> , Roemer, pl. vi, fig. 2                    | 206      |
| <i>Trigonia crenulata</i> , Lamarck, pl. iv, fig. 1                               | 206      |
| <i>Astarte washitensis</i> , n. s., Shumard, 1853, pl. iii, fig. 3                | 206, 207 |
| <i>Cardium multistriatum</i> , n. s., Shumard, 1853, pl. iv, fig. 2               | 207      |
| <i>Panopæa texana</i> , n. s., Shumard, 1853, pl. vi, fig. 1                      | 207      |
| <i>Terebratula choctawensis</i> , n. s., Shumard, 1853, pl. ii, figs. <i>a, b</i> | 207–208  |
| <i>Globiconcha (Tylostoma) tumida</i> , n. s., Shumard, 1853, pl. v, fig. 3       | 208      |
| <i>Globiconcha (?) elevata</i> , n. s., Shumard, 1853, pl. iv, fig. 4             | 208      |
| <i>Eulina (?) subfusiformis</i> , n. s., Shumard, 1853, pl. iv, fig. 3            | 208      |
| <i>Ammonites respertinus</i> , Morton                                             | 209      |
| <i>Ammonites marciaua</i> , n. s., Shumard, 1853, pl. iv, fig. 5                  | 209      |
| <i>A. acuto carinatus</i> , n. s., Shumard, 1853, pl. i, fig. 3                   | 209–210  |
| <i>Ammonites</i> — ? Shumard, 1853, pl. —, fig. —                                 | 210      |
| <i>Echinodermata.</i>                                                             |          |
| <i>Hemiaster elegans</i> , n. s., Shumard, 1853, pl. ii, figs. 4 <i>a-c</i>       | 210      |
| <i>Holaster simplex</i> , n. s., Shumard, 1853, pl. iii, fig. 2                   | 210–211  |
| <i>Holctypus planatus</i> , F. Roemer                                             | 211      |

### 2.

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|                                                          | Page. |
|----------------------------------------------------------|-------|
| <i>Acephala.</i>                                         |       |
| <i>Aricula nebrascana</i> , n. s., E. & S., 1857         | 38    |
| <i>Limopsis striato-punctatus</i> , n. s., E. & S., 1857 | 38    |



|                                                       | Page. |
|-------------------------------------------------------|-------|
| <i>Cer...</i> n. s., E. & S., 1857                    | 38-39 |
| <i>Cer...</i> n. s., E. & S., 1857                    | 39    |
| <i>Area sulcatina</i> , n. s., E. & S., 1857          | 39    |
| <i>...</i> n. s., E. & S., 1857                       | 39-40 |
| <i>Mytilus meekii</i> , n. s., E. & S., 1857          | 40    |
| <i>...</i> n. s., E. & S., 1857                       | 40    |
| <i>Gasteropoda.</i>                                   |       |
| <i>Pleurotoma minor</i> , n. s., E. & S., 1857        | 40-41 |
| <i>Fusus haydeni</i> , n. s., E. & S., 1857           | 41    |
| <i>Fusus nebrascensis</i> , n. s., E. & S., 1857      | 41    |
| <i>Turritella multilineata</i> , n. s., E. & S., 1857 | 41-42 |
| <i>...</i> n. s., E. & S., 1857                       | 42    |
| <i>Cephalopoda.</i>                                   |       |
| <i>Ammonites galpini</i> , n. s., E. & S., 1857       | 42    |

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## TERTIARY SPECIES.

|                                                   | Page.   |
|---------------------------------------------------|---------|
| <i>Leda ...</i> n. s., Shumard, 1858              | 120     |
| <i>Corbula ...</i> n. s., Shumard, 1858           | 120-121 |
| <i>Leda willamettensis</i> , n. s., Shumard, 1858 | 121     |
| <i>Leda oregona</i> , n. s., Shumard, 1858        | 121-122 |
| <i>Pecten coosensis</i> , n. s., Shumard, 1858    | 122     |
| <i>Venus ...</i> n. s., Shumard, 1858             | 122-123 |

## CRETACEOUS SPECIES.

|                                                         |         |
|---------------------------------------------------------|---------|
| <i>Inoceramus vancouverensis</i> , n. s., Shumard, 1858 | 123-124 |
| <i>Pinna calamitoides</i> , n. s., Shumard, 1858        | 124     |
| <i>Pyrula glabra</i> , n. s., Shumard, 1858             | 125     |

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|                                                        | Page.   |
|--------------------------------------------------------|---------|
| <i>Productus parvi</i> , n. s., Shumard, 1858          | 290     |
| <i>P. mexicanus</i> , n. s., Shumard, 1858             | 291     |
| <i>P. pulex</i> , n. s., Shumard, 1858                 | 291     |
| <i>P. semireticulatus</i> , Mart., sp.                 | 292     |
| <i>Aulosteges guadalupensis</i> , n. s., Shumard, 1858 | 292     |
| <i>Spirifer mexicanus</i> , n. s., Shumard, 1858       | 292-293 |
| <i>Spirifer ...</i> n. s., Shumard, 1858               | 293     |
| <i>Spirifer ...</i> n. s., Shumard, 1858               | 294     |
| <i>Reticia papillata</i> , n. s., Shumard, 1858        | 294-295 |
| <i>Reticia ...</i> n. s., Shumard, 1858                | 295     |
| <i>Rhynchonella guadalupae</i> , n. s., Shumard, 1858  | 295-296 |
| <i>Camarophoria ? bisulcata</i> , n. s., Shumard, 1858 | 296     |
| <i>Phillipsia perannulata</i> , n. s., Shumard, 1858   | 296-297 |
| <i>Fusulina elongata</i> , n. s., Shumard, 1858        | 297     |

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PERMIAN FOSSILS.

|                                                                           | Page.   |
|---------------------------------------------------------------------------|---------|
| <i>Zoophyta.</i>                                                          |         |
| <i>Chaetetes mackrothii</i> , Geinitz .....                               | 387     |
| <i>Chaetetes</i> , sp. (?) Shumard, 1859 .....                            | 388     |
| <i>Campophyllum</i> (?) <i>texanum</i> , n. s., Shumard, 1859 .....       | 388     |
| <i>Polycelia</i> ?, Shumard, 1859 .....                                   | 388     |
| <i>Crustacea.</i>                                                         |         |
| <i>Phillipsia perannulata</i> , Shumard, pl. xi, fig. 10 .....            | 388     |
| <i>Bairdia</i> , sp. (?), Shumard, 1859 .....                             | 388     |
| <i>Bryozoa</i> .....                                                      | 388     |
| <i>Fenestella popeana</i> , Prout .....                                   | 388     |
| <i>Acanthocladia americana</i> , Swallow .....                            | 388     |
| <i>Foraminifera.</i>                                                      |         |
| <i>Fusulina elongata</i> , Shumard .....                                  | 388-389 |
| <i>Brachiopoda.</i>                                                       |         |
| <i>Productus</i> .....                                                    | 389     |
| <i>P. calhounianus</i> , Swallow .....                                    | 389     |
| <i>P. mexicanus</i> , Shumard .....                                       | 389     |
| <i>P. pileolus</i> , Shumard .....                                        | 389     |
| <i>P. semirecticulatus</i> var. <i>antiquatus</i> , Martin .....          | 389     |
| <i>P. popei</i> , Shumard, pl. xi, figs. 8a, b .....                      | 389     |
| <i>P. norwoodii</i> , Swallow .....                                       | 389-390 |
| <i>P. leplayi</i> (?), Verneuil .....                                     | 390     |
| <i>Strophalosia</i> .....                                                 | 390     |
| <i>S. (Aulosteges) guadalupensis</i> , Shumard, pl. xi, figs. 5a, b ..... | 390     |
| <i>Chonetes</i> .....                                                     | 390     |
| <i>C. permiana</i> , n. s., Shumard, 1859 .....                           | 390     |
| <i>C. flemingi</i> (?), Norwood & Pratten .....                           | 390     |
| <i>Spirifer</i> .....                                                     | 390     |
| <i>S. mexicanus</i> , Shumard, pl. xi, figs. 4a, b .....                  | 390-391 |
| <i>S. guadalupensis</i> , n. s., Shumard, 1859 .....                      | 391     |
| <i>S. sulciferus</i> , Shumard, pl. xi, figs. 3a-c .....                  | 391     |
| <i>S. cameratus</i> , Morton .....                                        | 391     |
| <i>Spiriferina</i> .....                                                  | 391     |
| <i>S. billingsii</i> , Shumard .....                                      | 391-392 |
| <i>Terebratula</i> .....                                                  | 392     |
| <i>T. elongata</i> , Schlotheim .....                                     | 392     |
| <i>T. perinflata</i> , n. s., Shumard, 1859 .....                         | 392     |
| <i>Rhynchonella</i> .....                                                 | 392     |
| <i>R. guadalupæ</i> , Shumard, pl. xi, figs. 6a-c .....                   | 392     |
| <i>R. indentata</i> , n. s., Shumard, 1859 .....                          | 393     |
| <i>R. texana</i> , n. s., Shumard, 1859 .....                             | 393     |
| <i>Rhynchonella</i> , sp. (?), Shumard, 1859 .....                        | 393-394 |
| <i>Camerophoria</i> , Swallow, pl. xi, figs. 1a-e .....                   | 394     |
| <i>C. bisulcata</i> , Shumard, pl. xi, figs. 2a-d .....                   | 394     |
| <i>C. swallowiana</i> , n. s., Shumard, 1859, pl. xi, fig. 1 a-e .....    | 394-395 |
| <i>C. schlotheimi</i> (?), Buch .....                                     | 395     |
| <i>Retzia</i> .....                                                       | 395     |
| <i>R. papillata</i> , Shumard, pl. xi, figs. 9 a-c .....                  | 395     |
| <i>R. meekiana</i> , Shumard, pl. xi, figs. 7 a, b .....                  | 395     |
| <i>Streptorhynchus</i> .....                                              | 395     |
| <i>S. (Orthisina) shumardianus</i> , Swallow .....                        | 395     |
| <i>Orthisina</i> .....                                                    | 395     |
| <i>Orthisina</i> sp. (?), Shumard, 1859 .....                             | 395     |
| <i>Crania</i> .....                                                       | 395     |
| <i>C. permiana</i> , n. s., Shumard, 1859 .....                           | 395-396 |

|                                                               | Page.   |
|---------------------------------------------------------------|---------|
| <i>Acephala.</i>                                              |         |
| <i>Myalina</i> .....                                          | 396     |
| <i>M. squamosa</i> , Sow .....                                | 396     |
| <i>M. recta</i> , Shumard .....                               | 396     |
| <i>Pleurophorus</i> .....                                     | 396     |
| <i>P. occidentalis</i> , M. & H .....                         | 396     |
| <i>Monotis</i> .....                                          | 396     |
| <i>M. speluncaria</i> , Schlotheim .....                      | 396-397 |
| <i>Monotis</i> , sp. (?), Shumard, 1859 .....                 | 397     |
| <i>Axinus</i> .....                                           | 397     |
| <i>A. securis</i> , n. s., Shumard, 1859 .....                | 397     |
| <i>Edmondia</i> .....                                         | 398     |
| <i>E. suborbiculata</i> , Swallow .....                       | 398     |
| <i>Cardiomorpha</i> .....                                     | 398     |
| <i>Cardiomorpha</i> , sp. (?), Shumard, 1859 .....            | 398     |
| <i>Gasteropoda.</i>                                           |         |
| <i>Turbo</i> .....                                            | 398     |
| <i>T. guadalupensis</i> , n. s., Shumard, 1859 .....          | 398     |
| <i>T. helicinus</i> (?), Schlotheim .....                     | 398     |
| <i>Straparollus</i> .....                                     | 399     |
| <i>Straparollus</i> , sp. (?), Shumard, 1859 .....            | 399     |
| <i>Belerophon</i> .....                                       | 399     |
| <i>Bellerophon</i> , sp. (?), Shumard, 1859 .....             | 399     |
| <i>Pleurotomaria</i> .....                                    | 399     |
| <i>P. halliana</i> , n. s., Shumard, 1859 .....               | 399     |
| <i>Chemnitzia</i> .....                                       | 399     |
| <i>C. swallowiana</i> , n. s., Shumard, 1859 .....            | 399     |
| <i>Cephalopoda.</i>                                           |         |
| <i>Nautilus</i> , sp. (?), Shumard, 1859 .....                | 399-400 |
| <i>Orthoceras</i> , sp. (?), Shumard, 1859 .....              | 400     |
| CARBONIFEROUS FOSSILS.                                        |         |
| <i>Gasteropoda.</i>                                           |         |
| <i>Turbo texanus</i> , n. s., Shumard, 1859 .....             | 400     |
| <i>Straparollus cornudanus</i> , n. s., Shumard, 1859 .....   | 400-401 |
| <i>Pleurotomaria proutiana</i> , n. s., Shumard, 1859 .....   | 401     |
| <i>Pleurotomaria obtusispira</i> , n. s., Shumard, 1859 ..... | 401     |
| <i>Pleurotomaria perornata</i> , n. s., Shumard, 1859 .....   | 401-402 |
| <i>Macrocheilus texanus</i> , n. s., Shumard, 1859 .....      | 402     |

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# XIII.—THE WRITINGS OF ROBERT P. WHITFIELD.

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|                                                                        | Page.   |
|------------------------------------------------------------------------|---------|
| <i>Obolus</i> .....                                                    | 103     |
| <i>O. pectenoides</i> , n. s., Whitfield, 1875, pl. —, figs. 1-3 ..... | 103     |
| <i>Lingulepis primæformis</i> ? pl. —, fig. 4 .....                    | 103     |
| <i>Terebratula</i> .....                                               | 103     |
| <i>T. helena</i> , n. s., Whitfield, 1875, pl. —, figs. 5-10 .....     | 103-104 |

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|                                                                                      | Page.   |
|--------------------------------------------------------------------------------------|---------|
| <i>Orepicephalus</i> , Owen .....                                                    | 141     |
| <i>O. (Loganellus) montanensis</i> , n. s., Whitfield, 1876, pl. i, figs. 1, 2 ..... | 141     |
| <i>Arionellus</i> , Barrande .....                                                   | 141     |
| <i>A. tripunctatus</i> , n. s., Whitfield, 1876, pl. i, figs. 3-5 .....              | 141-142 |
| <i>Gryphæa</i> , Lam .....                                                           | 142     |
| <i>G. planoconvexa</i> , n. s., Whitfield, 1876, pl. ii, figs. 9, 10 .....           | 142     |
| <i>Gervillia</i> , DeFrance .....                                                    | 142     |
| <i>G. sparsalirata</i> , n. s., Whitfield, 1876, pl. ii, fig. 8 .....                | 142     |
| <i>Myalina</i> , De Koninck .....                                                    | 143     |
| <i>M. ? (Gervillea) perplana</i> , n. s., Whitfield, 1876, pl. i, fig. 8 .....       | 143     |
| <i>Pinna</i> , Linn .....                                                            | 143     |
| <i>P. ludlowi</i> , n. s., Whitfield, 1876, pl. i, figs. 6, 7 .....                  | 143     |
| <i>Tapes</i> , Mühlf. ....                                                           | 143     |
| <i>T. montanensis</i> , n. s., Whitfield, 1876, pl. ii, figs. 1, 2 .....             | 143-144 |
| <i>Mastra</i> , Linn .....                                                           | 144     |
| <i>M. maia</i> , n. s., Whitfield, 1876, pl. ii, fig. 5 .....                        | 144     |
| <i>Sanguinolaria</i> , Lam .....                                                     | 144     |
| <i>S. oblata</i> , n. s., Whitfield, 1876, pl. ii, figs. 3, 4 .....                  | 144     |
| <i>Thracia</i> , Leach .....                                                         | 144     |
| <i>T. (Corimya) grinnelli</i> , n. s., Whitfield, 1876, pl. ii, figs. 6, 7 .....     | 144-145 |
| <i>Vanikorphopsis</i> , Meek .....                                                   | 145     |
| <i>V. toumeyana</i> , M. & H., sp., 1856, pl. ii, figs. 11-13 .....                  | 145     |

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### FOSSILS FROM THE PRIMORDIAL ROCKS.

|                                                               | Page. |
|---------------------------------------------------------------|-------|
| <i>Plantæ</i> .....                                           |       |
| <i>Palæochorda</i> .....                                      | 7     |
| <i>P. prima</i> , n. s., Whitfield, 1877, pl. i, fig. 2 ..... | 7     |



|                                                                                                    | Page. |
|----------------------------------------------------------------------------------------------------|-------|
| <i>Palaeophycus</i> , Hall.....                                                                    | 7     |
| <i>P. occidentalis</i> , n. s., Whitfield, 1877, pl. i, fig. 3.....                                | 7-8   |
| <b>Mollusca.</b>                                                                                   |       |
| <b>Brachiopoda.</b>                                                                                |       |
| <i>Lingulepis cuneolus</i> , n. s., Whitfield, 1877, pl. ii, figs. 5-6.....                        | 8-9   |
| <i>Lingulepis perattenuatus</i> , n. s., Whitfield, 1877, pl. ii, figs. 7-9.....                   | 9     |
| <b>Articulata.</b>                                                                                 |       |
| <b>Trilobita.</b>                                                                                  |       |
| <b>Calymenidae.</b>                                                                                |       |
| <i>Crepicephalus</i> , Owen, (? <i>Loganellus</i> , Devine.).....                                  | 10    |
| <i>C. (Loganellus) centralis</i> , n. s., Whitfield, 1877, pl. ii, figs. 21-24.....                | 10-11 |
| <i>C. (Loganellus) planus</i> , n. s., Whitfield, 1877, pl. ii, fig. 20.....                       | 11    |
| FOSSILS FROM THE JURASSIC ROCKS.                                                                   |       |
| <b>Radiata.</b>                                                                                    |       |
| <b>Echinodermata.</b>                                                                              |       |
| <b>Asterioidea.</b>                                                                                |       |
| <i>Asterias</i> , Linnæus.....                                                                     | 15    |
| <i>A. ? dubium</i> , n. s., Whitfield, 1877, pl. iii, fig. 3.....                                  | 15    |
| <b>Pectenidae.</b>                                                                                 |       |
| <i>Pecten</i> , Brug.....                                                                          | 16    |
| <i>P. newberryi</i> , n. s., Whitfield, 1877, pl. iv, figs. 12-15.....                             | 16-17 |
| <i>Pseudomonotis (Eumicrotis) orbiculata</i> , n. s., Whitfield, 1877, pl. iii, figs. 17-19.....   | 17    |
| <b>Mytilidae.</b>                                                                                  |       |
| <i>Mytilus</i> , Linn.....                                                                         | 18    |
| <i>M. whitei</i> , n. s., Whitfield, 1877, pl. v, figs. 9-12.....                                  | 18    |
| <i>Trapezium</i> , Humph. (= <i>Cypriocardia</i> , Lam.).....                                      | 18    |
| <i>T. bellefourchensis</i> , n. s., Whitfield, 1877, pl. v, figs. 1-4.....                         | 18-19 |
| <i>T. subequalis</i> , n. s., Whitfield, 1877, pl. v, figs. 5-8.....                               | 19-20 |
| <i>Pleuromya</i> , Agassiz (family uncertain).....                                                 | 20    |
| <i>P. newtoni</i> , n. s., Whitfield, 1877, pl. v, figs. 19-20.....                                | 20-21 |
| <i>Tancredia corbuliformis</i> , n. s., Whitfield, 1877, pl. vi, figs. 5-8.....                    | 21-22 |
| <i>Tancredia bulbosa</i> , n. s., Whitfield, 1877, pl. vi, figs. 1-3.....                          | 22    |
| <i>Tancredia postica</i> , n. s., Whitfield, 1877, pl. vi, fig. 14.....                            | 22-23 |
| <b>Veneridae.</b>                                                                                  |       |
| <i>Dosinia</i> , Scopoli.....                                                                      | 23    |
| <i>D. jurassica</i> , n. s., Whitfield, 1877, pl. v, figs. 21-24.....                              | 23-24 |
| <b>Psammobiidae.</b>                                                                               |       |
| <i>Psammobia</i> , Lam.....                                                                        | 24    |
| <i>P. ? prematura</i> , n. s., Whitfield, 1877, pl. v, fig. 31.....                                | 24    |
| <i>Nœra</i> , Gray.....                                                                            | 24    |
| <i>N. longirostra</i> , n. s., Whitfield, 1877, pl. v, fig. 35.....                                | 24-25 |
| <b>Gastrochaenidae.</b>                                                                            |       |
| <i>Saxicava</i> , Bellevue.....                                                                    | 25    |
| <i>S. jurassica</i> , n. s., Whitfield, 1877, pl. v, figs. 25-30.....                              | 25-26 |
| FOSSILS OF THE CRETACEOUS.                                                                         |       |
| <b>Mollusca.</b>                                                                                   |       |
| <b>Lamellibranchiata.</b>                                                                          |       |
| <b>Pteriidae., Meek.</b>                                                                           |       |
| <i>Pteria</i> , Scop.....                                                                          | 29    |
| <i>P. (Pseudopteria) sublevis</i> , n. s., Whitfield, 1877, pl. vii, fig. 6.....                   | 29-31 |
| <i>Inoceramus perplexus</i> , n. s., Whitfield, 1877, pl. viii, fig. 3, and pl. x, figs. 4, 5..... | 31    |
| <i>Endocostea</i> , n. g., Whitfield, 1877.....                                                    | 31-32 |
| <i>E. typica</i> , n. s., Whitfield, 1877, pl. ix, figs. 1-7.....                                  | 32-33 |
| <b>Nuculanidae.</b>                                                                                |       |
| <i>Nuculana</i> .....                                                                              | 33    |
| <i>N. subequilatera</i> , n. s., Whitfield, 1877, pl. xi, figs. 3, 4.....                          | 33    |
| <b>Crassatellidae.</b>                                                                             |       |
| <i>Crassatella</i> , Lam.....                                                                      | 34    |
| <i>C. subquadrata</i> , n. s., Whitfield, 1877, pl. xi, fig. 12.....                               | 34    |
| <b>Cyprinidae.</b>                                                                                 |       |
| <i>Sphæriola</i> .....                                                                             | 34    |
| <i>S. transversa</i> , n. s., Whitfield, 1877, pl. x, figs. 14-16.....                             | 34-35 |

|                                                                                            | Page. |
|--------------------------------------------------------------------------------------------|-------|
| <i>Zellinidae.</i>                                                                         |       |
| <i>Leiopistha</i> , Meek .....                                                             | 35    |
| Subgenus <i>Cymella</i> , Meek .....                                                       | 35    |
| <i>Leiopistha (Cymella) meeki</i> , n. s., Whitfield, 1877, pl. xi, figs. 27, 28 .....     | 35-36 |
| <i>Anatinidae.</i>                                                                         |       |
| <i>Thracia</i> , Leach. ....                                                               | 36    |
| <i>T. subgracilis</i> , n. s., Whitfield, 1877, pl. xi, figs. 29-30 .....                  | 36    |
| <i>Gasteropoda.</i>                                                                        |       |
| <i>Fusus cheyennensis</i> , n. s., Whitfield, 1877, pl. xii, fig. 9 .....                  | *37   |
| <i>Aporrhais meeki</i> , n. s., Whitfield, 1877, pl. xii, fig. 5 .....                     | 37    |
| <i>Aporrhais (Goniocheila) castorensis</i> , n. s., Whitfield, 1877, pl. xii, fig. 1 ..... | 38    |
| <i>Akera</i> , O. F. Muller .....                                                          | 38    |
| <i>A. glans-oryza</i> , n. s., Whitfield, 1877, pl. xii, fig. 25 .....                     | 38-39 |
| <i>Cephalopoda.</i>                                                                        |       |
| <i>Helicoceras</i> , D'Orb. ....                                                           | 39    |
| <i>H. stevensoni</i> , n. s., Whitfield, 1877, pl. xiv, figs. 4-7 .....                    | 39-40 |
| <i>Heteroceras</i> , D'Orb. ....                                                           | 40    |
| <i>H. newtoni</i> , n. s., Whitfield, 1877, pl. xv, figs. 1-4 .....                        | 40-41 |
| <i>Ancyloceras</i> , D'Orb. ....                                                           | 42    |
| <i>A. jenneyi</i> , n. s., Whitfield, 1877, pl. xvi, figs. 6-8 .....                       | 42-43 |
| <i>A. tricostatus</i> , n. s., Whitfield, 1877, pl. xv, figs. 7-8 .....                    | 43-44 |
| <i>Ptychoceras meekianum</i> , n. s., Whitfield, 1877, pl. xvi, figs. 1-2 .....            | 44-45 |
| <i>Ptychoceras crassum</i> , n. s., Whitfield, 1877, pl. xvi, figs. 3-5 .....              | 45-46 |
| List of fossils described in the report of the Paleontology of the Black Hills ....        | 46-49 |

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WHITFIELD, R. P. Paleontology of the Black Hills of Dakota. <Report on the Geology and Resources of the Black Hills of Dakota, by Henry Newton, E. M., and Walter P. Jenney, E. M. <U. S. Geographical and Geological Survey of the Rocky Mountain region, J. W. Powell in charge, pp. 325-468, pls. i-xvi. Washington, 1880.

FOSFILLS FROM THE PRIMORDIAL ROCKS.

|                                                                      |         |
|----------------------------------------------------------------------|---------|
| <i>Plantae.</i>                                                      | Page.   |
| <i>Palæochorda</i> .....                                             | 331     |
| <i>P. prina</i> , Whitfield, 1877, pl. i, fig. 2 .....               | 331-332 |
| <i>Palæophycus</i> , Hall .....                                      | 332     |
| <i>P. occidentalis</i> , Whitfield, 1877, pl. i, fig. 3 .....        | 332     |
| <i>Palæophycus</i> , sp.? Whitfield, 1880, pl. i, fig. 1 .....       | 333     |
| <i>Incertæ sedes.</i>                                                |         |
| <i>Arenicolites</i> , sp.? Whitfield, 1880, pl. ii, fig. 25 .....    | 333-334 |
| <i>Brachiopoda.</i>                                                  |         |
| <i>Lingulidae.</i>                                                   |         |
| <i>Lingulepis</i> , Hall .....                                       | 335     |
| <i>L. pinnaformis</i> , Owen, pl. ii, figs. 1-4 .....                | 335     |
| <i>L. cuneolus</i> , Whitfield, 1877, pl. ii, figs. 5-6 .....        | 336     |
| <i>L. perattenuatus</i> , Whitfield, 1877, pl. ii, figs. 7-9 .....   | 337     |
| <i>L. dakotensis</i> , M. & H., pl. ii, figs. 10-11 .....            | 337-338 |
| <i>Obolidae.</i>                                                     |         |
| <i>Obolus</i> , Eichwald .....                                       |         |
| <i>O. ? pectenoides</i> , Whitfield, 1875, pl. ii, figs. 18-19 ..... | 338-339 |
| <i>Obolella</i> , Billings .....                                     | 339     |
| <i>O. polita</i> , Hall, 1860, pl. ii, figs. 12, 13 .....            | 339-340 |
| <i>O. nana</i> , M. & H., 1861, pl. ii, figs. 14-17 .....            | 340-341 |
| <i>Articulata.</i>                                                   |         |
| <i>Trilobita.</i>                                                    |         |
| <i>Oalymenidae.</i>                                                  |         |
| <i>Crepicephalus</i> , Owen (? <i>Loganellus</i> , Devine) .....     | 341     |
| <i>C. centralis</i> , Whitfield, 1877, pl. ii, figs. 21-24 .....     | 341-343 |
| <i>C. planus</i> , Whitfield, 1877, pl. ii, fig. 20 .....            | 343-344 |

FOSFILLS FROM THE JURASSIC ROCKS.

|                                                             |         |
|-------------------------------------------------------------|---------|
| <i>Radiata.</i>                                             |         |
| <i>Echinodermata.</i>                                       |         |
| <i>Asteroidæ.</i>                                           |         |
| <i>Asterias</i> , Linu .....                                | 344     |
| <i>A. ? dubium</i> , Whitfield, 1877, pl. iii, fig. 3 ..... | 344-345 |

|                                                                                         | Page.   |
|-----------------------------------------------------------------------------------------|---------|
| <b>Orinoidea.</b>                                                                       |         |
| <b>Pentacrinidae.</b>                                                                   |         |
| <i>Pentacrinites</i> , Miller .....                                                     | 345     |
| <i>P. asteriscus</i> , M. & H., 1858, pl. 3, figs. 1-2.....                             | 345     |
| <b>Brachiopoda.</b>                                                                     |         |
| <b>Lingulidae.</b>                                                                      |         |
| <i>Lingula</i> , Brug. ....                                                             | 346     |
| <i>L. brevirostris</i> , M. & H., 1858, pl. iii, figs. 4-5.....                         | 346-347 |
| <b>Rhynchonellidae.</b>                                                                 |         |
| <i>Rhynchonella</i> , Fischer .....                                                     | 347     |
| <i>R. myrina</i> , pl. iii, figs. 6-7.....                                              | 347     |
| <b>Lamellibranchiata.</b>                                                               |         |
| <b>Ostreidae.</b>                                                                       |         |
| <i>Ostrea</i> , Linn .....                                                              | 348     |
| <i>O. strigilecula</i> , White, pl. iii, figs. 8-12.....                                | 348-349 |
| <i>Gryphæa</i> , Lam. ....                                                              | 349     |
| <i>G. calceola</i> var. <i>nebrascensis</i> , M. & H., 1861, pl. iii, figs. 13-16 ..... | 349-350 |
| <b>Pectenidae.</b>                                                                      |         |
| <i>Pecten</i> , Bruguières .....                                                        | 350     |
| <i>P. newberryi</i> , Whitfield, 1877, pl. iv, figs. 12-15.....                         | 350-351 |
| <i>Camptonectes</i> , Agassiz .....                                                     | 351     |
| <i>C. bellistriatus</i> , Meek, 1860, pl. iv, figs. 6-11 .....                          | 351-353 |
| <i>C. extenuatus</i> , M. & H., 1860, pl. iv, figs. 4, 5 .....                          | 353-354 |
| <b>Aviculidae.</b>                                                                      |         |
| <i>Pseudomonotis</i> , Bronn .....                                                      | 354     |
| <i>P. (Eumicrotis) curta</i> , Hall, 1852, pl. iii, figs. 20-25.....                    | 354-356 |
| <i>P. (Eumicrotis) orbiculata</i> , Whitfield, 1877, pl. iii, figs. 17-19.....          | 356-357 |
| <i>Avicula</i> , Lam. ....                                                              | 357     |
| Subgenus <i>Oxytoma</i> , Meek .....                                                    | 357     |
| <i>A. (Oxytoma) mucronata</i> , M. & H., pl. iv, figs. 1, 2.....                        | 357-358 |
| <i>Gervillia</i> , DeFrance .....                                                       | 358     |
| <i>G. recta</i> , Meek, pl. iv, fig. 3 .....                                            | 358-359 |
| <b>Arcidae.</b>                                                                         |         |
| <i>Grammatodon</i> , M. & H. ....                                                       | 359     |
| <i>G. inornatus</i> , M. & H., 1858, pl. v, figs. 16-18.....                            | 359-360 |
| <b>Mytilidae.</b>                                                                       |         |
| <i>Mytilus</i> , Linn .....                                                             | 360     |
| <i>M. whitei</i> , Whitfield, 1877, pl. v, figs. 9-12.....                              | 360-361 |
| <i>Voisella</i> , Scopoli .....                                                         | 361     |
| <i>V. (modiola) formosa</i> , M. & H., 1861, pl. v, fig. 15.....                        | 361-362 |
| <i>V. pertenuis</i> , M. & H., 1858, pl. v, figs. 13, 14 .....                          | 362-363 |
| <b>Crassatellidae.</b>                                                                  |         |
| <i>Astarte</i> , Sowerby .....                                                          | 363     |
| <i>A. ? fragilis</i> , M. & H., 1860, pl. v, figs. 32, 33.....                          | 363-364 |
| <i>Trapezium</i> , Humph. (= <i>Cypricardia</i> , Lam.) .....                           | 364     |
| <i>T. bellefourchensis</i> , Whitfield, 1877, pl. v, figs. 1-4 .....                    | 364-365 |
| <i>T. subequalis</i> , Whitfield, 1877, pl. v, figs. 5-8 .....                          | 365-366 |
| <i>Pleuromya</i> , Agassiz (family uncertain) .....                                     | 367     |
| <i>P. newtoni</i> , Whitfield, 1877, pl. v, figs. 19, 20 .....                          | 367-368 |
| <b>Tancrediidae.</b>                                                                    |         |
| <i>Tancredia</i> , Lycett (= <i>Hettangia</i> , Terquem) .....                          | 368     |
| <i>T. ? inornata</i> , M. & H., 1860, pl. vi, figs. 9-13 .....                          | 368-369 |
| <i>T. corbuliformis</i> , Whitfield, 1877, pl. vi, figs. 5-8 .....                      | 370     |
| <i>T. bulbosa</i> , Whitfield, 1877, pl. vi, figs. 1-3 .....                            | 370-371 |
| <i>T. postica</i> , Whitfield, 1877, pl. vi, fig. 14.....                               | 371-372 |
| <i>T. warrenana</i> , M. & H., 1860, pl. vi, fig. 4 .....                               | 372     |
| <b>Veneridae.</b>                                                                       |         |
| <i>Dosinia</i> , Scopoli .....                                                          | 373     |
| <i>D. jurassica</i> , Whitfield, 1877, pl. v, figs. 21-24.....                          | 373     |
| <b>Psammobiidae.</b>                                                                    |         |
| <i>Psammobia</i> , Lam. ....                                                            | 374     |
| <i>P. ? prematura</i> , Whitfield, 1877, pl. v, fig. 31 .....                           | 374     |
| <b>Anatinidae.</b>                                                                      |         |
| <i>Thracia</i> , Leach .....                                                            | 375     |
| <i>T. ? sublevis</i> , M. & H., 1860, pl. v, fig. 34 .....                              | 375     |

|                                                                                        | Page.    |
|----------------------------------------------------------------------------------------|----------|
| <i>Necera</i> , Gray.....                                                              | 376      |
| <i>N. longirostra</i> , Whitfield, 1877, pl. v, fig. 35.....                           | 376      |
| <i>Gastrochaenidae</i> .                                                               |          |
| <i>Saxicava</i> , Belle[v]ue.....                                                      | 376      |
| <i>S. jurassica</i> , Whitfield, 1877, pl. v, figs. 25-30.....                         | 376-377  |
| <i>Cephalopoda</i> .                                                                   |          |
| <i>Tetrabranchiata</i> .                                                               |          |
| <i>Ammonitidae</i> .                                                                   |          |
| <i>Ammonites</i> , Bruguière.....                                                      | 378      |
| <i>A. cordiformis</i> , M. & H., 1858, pl. vi, figs. 20-24.....                        | 378-380  |
| <i>A. cordiformis</i> var. <i>distans</i> , Whitfield, 1880, pl. vi, fig. 25.....      | 380-381  |
| <i>Dibranchiata</i> .                                                                  |          |
| <i>Belemnitidae</i> .                                                                  |          |
| <i>Belemnites</i> , Agricola.....                                                      | 381      |
| <i>B. densus</i> , M. & H., 1858, pl. vi, figs. 15-19.....                             | 381-382  |
| FOSSILS FROM THE CRETACEOUS ROCKS.                                                     |          |
| <i>Lamellibranchiata</i> .                                                             |          |
| <i>Monomyaria</i> .                                                                    |          |
| <i>Pectinidae</i> .                                                                    |          |
| <i>Synclonema</i> , Meek.....                                                          | 383      |
| <i>S. rigida</i> , H. & M., pl. vii, fig. 1.....                                       | 383-384  |
| <i>Heteromyaria</i> .                                                                  |          |
| <i>Aviculidae</i> .                                                                    |          |
| <i>Pteria</i> , Scopoli.....                                                           | 384      |
| <i>P. linguiformis</i> , E. & S., sp., pl. vii, figs. 2, 3.....                        | 384-385  |
| <i>P. (Oxytoma) nebrascana</i> , E. & S., pl. vii, fig. 4.....                         | 385-386  |
| <i>P. (Pseudopteria) fibrosa</i> , M. & H., sp., 1856, pl. vii, fig. 5.....            | 386      |
| <i>P. (Pseudopteria) sublevis</i> , Whitfield, 1877, pl. vii, fig. 6.....              | 387      |
| <i>Inoceramus</i> , Sowerby.....                                                       | 389      |
| <i>I. problematicus</i> ? Schlöt., pl. vii, fig. 11.....                               | 389-390  |
| <i>I. fragilis</i> , H. & M., pl. ix, fig. 10.....                                     | 390-391  |
| <i>I. altus</i> , Meek, 1871, pl. ix, fig. 11.....                                     | 391      |
| <i>I. perplexus</i> , Whitfield, 1877, pl. viii, fig. 3, and pl. x, figs. 4, 5.....    | 392      |
| <i>I. sublevis</i> , H. & M., pl. x, figs. 1-3.....                                    | 393      |
| <i>I. sagensis</i> , Owen, 1852, pl. vii, fig. 12, and pl. viii, fig. 2.....           | 393-395  |
| <i>I. simpsoni</i> , Meek, 1860, pl. viii, fig. 1.....                                 | 395-396  |
| <i>I. vanuxemi</i> , M. & H., 1860, pl. vii, figs. 8, 9, and pl. viii, figs. 4, 5..... | 396-398  |
| <i>I. vanuxemi</i> var. ? Whitfield, 1880, pl. vii, fig. 10.....                       | 398      |
| <i>I. barabini</i> , Morton, 1834, pl. vii, fig. 7, and pl. ix, fig. 8.....            | 398-400  |
| <i>I. tenuilineatus</i> , H. & M., pl. ix, figs. 12, 13.....                           | 400, 402 |
| <i>Endocostea</i> , Whitfield, 1877.....                                               | 402-403  |
| <i>E. typica</i> , Whitfield, 1877, pl. ix, figs. 1-7.....                             | 403-404  |
| <i>E. sulcata</i> , Roemer, sp., pl. x, fig. 6.....                                    | 404-405  |
| <i>Integropallia</i> .                                                                 |          |
| <i>Arceidae</i> .                                                                      |          |
| Subgenus <i>Idonearca</i> , Conrad.....                                                | 405      |
| <i>Idonearca shumardi</i> , M. & H., pl. xi, figs. 8-11.....                           | 405-406  |
| <i>Nucula</i> , Lam. ....                                                              | 406      |
| <i>N. planimarginata</i> , M. & H., 1856, pl. xi, figs. 5, 6.....                      | 406-407  |
| <i>Nuculana</i> , Link. ....                                                           | 407      |
| <i>N. bisulcata</i> , M. & H., 1861, pl. xi, fig. 7.....                               | 407-408  |
| <i>N. subequilatera</i> , Whitfield, 1877, pl. xi, figs. 3, 4.....                     | 408      |
| <i>Yoldia</i> , Möller.....                                                            | 409      |
| <i>Y. evansi</i> , M. & H., 1866, pl. xi, figs. 1, 2.....                              | 409      |
| <i>Lucinidae</i> .                                                                     |          |
| <i>Lucina</i> , Bruguière.....                                                         | 409      |
| <i>L. occidentalis</i> , Morton, pl. xi, figs. 19-21.....                              | 409-410  |
| <i>L. ventricosa</i> , H. & M., pl. xi, figs. 14-16.....                               | 410-411  |
| <i>L. (Diplodonta?) subundata</i> , H. & M., pl. xi, figs. 17, 18.....                 | 411-412  |
| <i>Crassatellidae</i> .                                                                |          |
| <i>Crassatella</i> , Lam. ....                                                         | 412      |
| <i>C. subquadrata</i> , Whitfield, 1877, pl. xi, fig. 12.....                          | 412-413  |
| <i>Astarte</i> , Sowerby.....                                                          | 413      |
| <i>A. evansi</i> , H. & M., pl. xi, fig. 13.....                                       | 413      |



|                                                                              |         |
|------------------------------------------------------------------------------|---------|
| <i>Venieliidae</i> .                                                         | Page.   |
| <i>Veniella</i> , Stoliczka .....                                            | 414     |
| <i>V. humilis</i> , M. & H., 1860, pl. x, figs. 7-13 .....                   | 414     |
| <i>Sphaeriola</i> .....                                                      | 415     |
| <i>S. transversa</i> , Whitfield, 1877, pl. x, figs. 14-16 .....             | 415     |
| <i>Sinuopallia</i> .                                                         |         |
| <i>Veneridae</i> .                                                           |         |
| <i>Dosinia</i> , Scopoli .....                                               | 416     |
| <i>D. missouriana</i> ? Morton, pl. xi, figs. 25, 26 .....                   | 416-417 |
| <i>Thetis</i> , Linn. ....                                                   | 417     |
| <i>T. circularis</i> , M. & H., 1856, pl. xi, figs. 21-24 .....              | 417     |
| Family?                                                                      |         |
| <i>Leiopistha</i> , Meek .....                                               | 418     |
| Subgenus <i>Cymella</i> , Meek .....                                         | 418     |
| <i>L. (Cymella) meeki</i> , Whitfield, 1877, pl. xi, figs. 27, 28 .....      | 418-419 |
| <i>Anadimidae</i> .                                                          |         |
| <i>Thracia</i> , Leach .....                                                 | 419     |
| <i>T. subgracilis</i> , Whitfield, 1877, pl. xi, figs. 29, 30 .....          | 419-420 |
| <i>Neæra</i> , Gray .....                                                    | 420     |
| <i>N. moreauensis</i> , M. & H., pl. xi, fig. 31 .....                       | 420     |
| <i>Gasteropoda</i> .                                                         |         |
| <i>Siphonostomata</i> .                                                      |         |
| <i>Fasciolaridae</i> .                                                       |         |
| <i>Fasciolaria</i> , Lam. ....                                               | 421     |
| <i>F. (Cryptorhytis) fusiformis</i> , H. & M., pl. xii, fig. 12 .....        | 421-422 |
| <i>F. (Cryptorhytis) contorta</i> , M. & H., pl. xii, fig. 10 .....          | 422-423 |
| <i>F. (Piestoecheilus) culbertsoni</i> , M. & H., pl. xii, fig. 11 .....     | 423-424 |
| <i>Fusus</i> , Lam. ....                                                     | 424     |
| <i>F. shumardi</i> , H. & M., pl. xii, figs. 7, 8 .....                      | 424     |
| <i>F. cheyennensis</i> , Whitfield, 1877, pl. xii, fig. 9 .....              | 424-425 |
| <i>Aporrhaidæ</i> .                                                          |         |
| <i>Aporrhais</i> , Dillwyn .....                                             | 425     |
| <i>A. neuberryi</i> , Meek, pl. xii, fig. 4 .....                            | 425-426 |
| <i>A. meeki</i> , Whitfield, 1877, pl. xii, fig. 5 .....                     | 426     |
| <i>A. (Goniocheila) castorensis</i> , Whitfield, 1877, pl. xii, fig. 1 ..... | 427     |
| <i>Anchura</i> , Conrad .....                                                | 428     |
| <i>A. ? sublevis</i> , M. & H., pl. xii, fig. 6 .....                        | 428     |
| <i>A. (Drepanocheilus) nebrascensis</i> , E. & S., pl. xii, figs. 2, 3 ..... | 429     |
| <i>Holostomata</i> .                                                         |         |
| <i>Naticidae</i> .                                                           |         |
| <i>Lunatia</i> , Gray .....                                                  | 430     |
| <i>L. concinna</i> , H. & M., pl. xii, fig. 13 .....                         | 430     |
| <i>Vanikora</i> , Quoy and Gaimard .....                                     | 430     |
| <i>V. ambigua</i> , M. & H., pl. xii, fig. 14 .....                          | 430-431 |
| <i>Amauropsis</i> , Morch .....                                              | 431     |
| <i>A. paludineformis</i> , H. & M., pl. xii, fig. 16 .....                   | 431-432 |
| <i>Trochidae</i> .                                                           |         |
| <i>Margarita</i> , Leach .....                                               | 432     |
| <i>M. nebrascensis</i> , M. & H., pl. xii, fig. 15 .....                     | 432     |
| <i>Pulmonifera</i> ?                                                         |         |
| <i>Siphonariidae</i> ?                                                       |         |
| <i>Anisomyon</i> , M. & H. ....                                              | 433     |
| <i>A. alveolus</i> , M. & H., pl. xii, fig. 20 .....                         | 433-434 |
| <i>A. subovatus</i> , M. & H., pl. xii, fig. 19 .....                        | 434-435 |
| <i>A. patelliformis</i> , M. & H., pl. xii, figs. 17, 18 .....               | 435     |
| <i>A. borealis</i> , Morton, 1842, pl. xii, figs. 21-23 .....                | 436     |
| <i>Tectibranchiata</i> .                                                     |         |
| <i>Bullidae</i> .                                                            |         |
| <i>Haminea</i> , Leach .....                                                 | 437     |
| <i>H. subcylindrica</i> , M. & H., pl. xii, fig. 24 .....                    | 437     |
| <i>Akera</i> , O. F. Muller .....                                            | 437     |
| <i>A. glans-oryza</i> , Whitfield, 1877, pl. xii, fig. 25 .....              | 437-438 |
| <i>Prosopoecephala</i> .                                                     |         |
| <i>Solenonchæ</i> .                                                          |         |
| <i>Dentaliidae</i> .                                                         |         |
| <i>Dentalium</i> , Linn. ....                                                | 438     |
| <i>D. gracile</i> , H. & M., pl. xii, fig. 26 .....                          | 438-439 |

*Cephalopoda.*

*Tetrabranchiata.*

*Nautilidæ.*

*Nautilus*, Breynius.

*N. dekayi* var. *montanaensis*, Meek, pl. xvi, figs. 10, 11 ..... 439-440

*Ammonitidæ.*

*Prionocyclus*, Meek ..... 440

*P. wyomingensis*, Meek, 1870, pl. xiv, figs. 1-3 ..... 440-441

*Scaphitidæ.*

*Scaphites*, Parkinson ..... 441

*S. nodosus*, Owen, 1852, pl. xiii, fig. 12 ..... 441-443

*S. nodosus* var. *brevis*, Meek, pl. xiii, figs. 8, 9 ..... 443

*S. nodosus* var. *quadrangularis*, Meek, pl. xiii, figs. 10, 11 ..... 443-444

*S. warreni*, M. & H., pl. xiii, figs. 1-4 ..... 444-446

*S. wyomingensis*, M. & H., pl. xiii, figs. 5-7 ..... 446-447

*Helicoceras*, D'Orb. .... 447

*H. stevensoni*, Whitfield, 1877, pl. xiv, figs. 5-8 ..... 447-449

*Heteroceras*, D'Orb. .... 449

*H. newtoni*, Whitfield, 1877, pl. xv, figs. 1-4 ..... 449-451

*H. ? nebrascense*, M. & H., pl. xv, fig. 6, and pl. xiv, fig. 9 ..... 451-452

*Ancyloceras*, D'Orb. .... 452

*A. jenneyi*, Whitfield, 1877, pl. xvi, figs. 7-9 ..... 452-454

*A. tricostatus*, Whitfield, 1877, pl. xv, figs. 7, 8 ..... 454-455

*Ptychoceras*, D'Orb. .... 455-457

*P. meekianum*, Whitfield, 1877, pl. xvi, figs. 1, 2 ..... 457-458

*P. crassum*, Whitfield, 1877, pl. xvi, figs. 3-5 ..... 459

Synopsis of species from the Black Hills, noticed in other works, not described in this report ..... 460-464

List of fossils described in this report ..... 465-468

5.

WHITFIELD, R. P. Brachiopoda and Lamellibranchiata of the Raritan Clays and Green sand Marls of New Jersey. < Monographs of the United States Geological Survey, Vol. ix, pp. i-xx and 1-264, pls. i-xxxv. Washington, 1885.

CONTENTS.

|                                                                                 | Page. |
|---------------------------------------------------------------------------------|-------|
| Letter of transmittal from Prof. George H. Cook .....                           | ix    |
| Sketch of the Geology of Cretaceous and Tertiary formations of New Jersey ..... | ix    |
| Letter of transmittal from Prof. Robert P. Whitfield .....                      | xv    |
| Preliminary remarks .....                                                       | xvii  |
| Brachiopoda .....                                                               | 3     |
| Section I.—Brachiopoda of the Marl Beds .....                                   | 5     |
| Lamellibranchiata .....                                                         | 17    |
| Section II.—Lamellibranchiata from the Raritan Clays .....                      | 22    |
| Section III.—Lamellibranchiata from the Lower Marl Beds .....                   | 29    |
| Section IV.—Lamellibranchiata from the Middle Marl Beds .....                   | 194   |
| Section V.—Lamellibranchiata from the base of the Upper Marls .....             | 205   |
| Section VI.—Lamellibranchiata from the Eocene Marls .....                       | 222   |
| Section VII.—Unionidæ from the Camden Clays .....                               | 243   |
| Section VIII.—Classified list of the species .....                              | 253   |

BRACHIOPODA.

Section I.—Brachiopoda from the several Marl Beds of the State.

*Brachiopoda.*

*Terebratulidæ.*

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| <i>Terebratula</i> , Llhwyd .....                                 | 6     |
| <i>T. harlani</i> , Morton, pl. i, figs. 15-23 .....              | 6-9   |
| <i>Terebratulina atlantica</i> , Morton, pl. i, figs. 10-13 ..... | 9-11  |
| <i>Terebratulina floridana</i> , Morton .....                     | 11-12 |
| <i>Terebratulina lachryma</i> , Morton, pl. i, fig. 14 .....      | 12    |
| <i>Terebratella</i> , D'Orb. ....                                 | 12    |
| <i>T. plicata</i> , Say, 1829, pl. i, figs. 5-9 .....             | 12-14 |
| <i>T. vanuxemi</i> , Lyell & Forbes, 1845, pl. i, figs. 1-4 ..... | 14-15 |

## LAMELLIBRANCHIATA.

Page.

## Section II.—Lamellibranchiate Shells from the Plastic Clay:

*Astartidae.*

|                                              |       |
|----------------------------------------------|-------|
| <i>Astarte</i> , Sowerby.....                | 23    |
| <i>A. veta</i> , Conrad, pl. ii, fig. 1..... | 23-24 |

*Oyprinidae.*

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| <i>Ambonicardia</i> , n. g., Whitfield, 1885.....                       | 24-25 |
| <i>A. cookii</i> , n. s., Whitfield, 1885, pl. ii, figs. 11-14.....     | 25    |
| <i>Corbicula</i> , Megerle.....                                         | 26    |
| <i>O. ? emacerata</i> , n. s., Whitfield, 1885, pl. ii, figs. 5, 6..... | 26    |
| <i>O. annosa</i> , Conrad, pl. ii, figs. 2-4.....                       | 26-27 |
| <i>Gnathodon</i> .....                                                  | 27    |
| <i>G. ? tenuidens</i> , n. s., Whitfield, 1885, pl. ii, figs. 7-10..... | 27-28 |

## Section III.—Lamellibranchiata from the Lower Marl Beds.

*Integripalliata.**Asiphonida.**Monomyaria.**Ostreidae.*

|                                                                                                 |       |
|-------------------------------------------------------------------------------------------------|-------|
| <i>Ostrea</i> , Linn.....                                                                       | 29    |
| <i>O. denticulifera</i> , Conrad, pl. iii, figs. 8, 9.....                                      | 29    |
| <i>O. crenulimarginata</i> , Gabb, pl. iii, figs. 10, 11.....                                   | 30    |
| <i>O. panda</i> , Morton.....                                                                   | 30    |
| <i>O. plumosa</i> , Morton, pl. iii, figs. 12, 13.....                                          | 31-32 |
| <i>O. subspatulata</i> , L. & Sow., 1845, pl. iii, fig. 14.....                                 | 32-33 |
| <i>O. tecticosta</i> , Gabb, pl. iii, figs. 1, 2.....                                           | 33-34 |
| <i>O. larva</i> , Lamarek, pl. iii, figs. 3, 7.....                                             | 34-36 |
| <i>Gryphæa</i> , Lam.....                                                                       | 36    |
| <i>G. vesicularis</i> , Lam. ? (1806), pl. iii, figs. 15, 16; pl. iv, figs. 1-3; and pl. v..... | 36-39 |
| <i>Exogyra</i> , Say.....                                                                       | 39    |
| <i>E. costata</i> , Say, pl. vi, figs. 1, 2.....                                                | 39-41 |

*Anomiidae.*

|                                                                                |       |
|--------------------------------------------------------------------------------|-------|
| <i>Anomia</i> , Linn.....                                                      | 42    |
| <i>A. argentaria</i> , Morton, pl. iv, figs. 9-11.....                         | 42    |
| <i>A. tellinoides</i> , Morton, pl. iv, figs. 12, 13.....                      | 43    |
| <i>Diploschiza</i> , Conrad, 1866.....                                         | 43    |
| <i>D. cretacea</i> , Conrad, pl. iv, figs. 4-8.....                            | 43-44 |
| <i>Paranomía</i> , Conrad, 1860.....                                           | 44    |
| <i>P. scabra</i> , Morton, pl. x, fig. 10.....                                 | 44    |
| <i>P. lineata</i> , Conrad, pl. ix, fig. 10.....                               | 45    |
| <i>Pecten</i> , Klein.....                                                     | 45    |
| <i>P. venustus</i> , Mort., pl. vii, figs. 1-4.....                            | 45-46 |
| <i>P. quinquenarius</i> , Conrad, 1854, pl. vii, figs. 13-16.....              | 47    |
| <i>P. tenuitestus</i> , Gabb, 1861, pl. vii, figs. 5, 6.....                   | 47-48 |
| <i>P. planicostatus</i> , n. s., Whitfield, 1885, pl. viii, figs. 10, 11.....  | 48-49 |
| <i>P. (Ohlamys) craticulus</i> , Morton, pl. vii, figs. 17, 18.....            | 49-50 |
| <i>P. (Synecyclonema ?) perlamellosus</i> , pl. vii, fig. 7.....               | 50-51 |
| <i>Amusium</i> , Klein.....                                                    | 51    |
| <i>A. simplicum</i> , Conrad, pl. vii, figs. 11, 12.....                       | 51-52 |
| <i>A. conradi</i> , n. s., Whitfield, 1885, pl. vii, figs. 8-10.....           | 52-53 |
| <i>Camptonectes (Amusium) burlingtonensis</i> , Gabb, pl. viii, figs. 3-9..... | 53-55 |
| <i>Camptonectes parvus</i> , n. s., Whitfield, 1885, pl. viii, figs. 1, 2..... | 55    |
| <i>Neithea</i> , Drouet.....                                                   | 56    |
| <i>N. quinquecostata</i> (Sowerby), pl. viii, figs. 12-14.....                 | 56-57 |

*Spondylidae.*

|                                                                               |       |
|-------------------------------------------------------------------------------|-------|
| <i>Spondylus</i> , Lam.....                                                   | 57    |
| <i>S. gregalis</i> , Morton, pl. ix, figs. 11, 12, and pl. x, figs. 1, 2..... | 57-58 |
| <i>Dianchora</i> , Sowerby.....                                               | 58-59 |
| <i>D. echinata</i> , Morton, pl. x, figs. 3-9.....                            | 59-60 |
| <i>Plicatula</i> , Lam.....                                                   | 61    |
| <i>P. urticosa</i> , Morton, pl. ix, figs. 1, 2.....                          | 61    |
| <i>Radula</i> , Klein.....                                                    | 61    |
| <i>R. pelagica</i> , Morton, pl. ix, figs. 3-5.....                           | 61-62 |
| <i>R. acutilineata</i> , Conrad, pl. ix, figs. 6, 7.....                      | 62-63 |
| <i>R. reticulata</i> , Lyell & Forbes, 1845, pl. ix, figs. 8, 9.....          | 63-64 |

*Heteromyaria.*

Page.

*Mytilidæ.*

|                                                                                   |       |
|-----------------------------------------------------------------------------------|-------|
| <i>Mytilus</i> , Linn. ....                                                       | 64    |
| <i>M. obtusius</i> , n. s., Whitfield, 1885, pl. xvii, fig. 1. ....               | 64    |
| <i>Modiola</i> , Lam. ....                                                        | 64    |
| <i>M. julia</i> , Lea, 1861, pl. xvii, figs. 6, 7? ....                           | 64-65 |
| <i>M. burlingtonensis</i> , n. s., Whitfield, 1885, pl. xvii, figs. 8, 9 ....     | 65-66 |
| <i>Lithodomus</i> , Cuvier. ....                                                  | 66    |
| <i>L. affinis</i> , Gabb, 1861, pl. xvii, figs. 2, 3. ....                        | 66-67 |
| <i>L. ripleyana</i> , Gabb, 1861, pl. xvii, figs. 4, 5. ....                      | 67-68 |
| <i>Pteriidæ</i> , Meek (= <i>Aviculidæ</i> of Authors). ....                      | 68    |
| <i>Pteria</i> , Scopoli. ....                                                     | 68    |
| <i>P. petrosa</i> , Conrad, pl. xiv, fig. 10. ....                                | 68-69 |
| <i>P. laripes</i> , Morton, pl. xiv, fig. 9. ....                                 | 69-70 |
| <i>P. navicula</i> , n. s., Whitfield, 1885, pl. xiv, fig. 8. ....                | 70-71 |
| <i>Meleagrinella</i> , n. g., Whitfield, 1885. ....                               | 71-72 |
| <i>M. abrupta</i> , Conrad, pl. xiv, figs. 11-14. ....                            | 72-73 |
| <i>Gerrilliopsis</i> , n. g., Whitfield, 1885. ....                               | 73    |
| <i>G. ensiformis</i> , Conrad, pl. xv, figs. 8-11, and pl. xvi, fig. 5. ....      | 73-74 |
| <i>G. minima</i> , n. s., Whitfield, 1885, pl. xv, fig. 7. ....                   | 74-75 |
| <i>Inoceramus</i> , Sowerby. ....                                                 | 75    |
| <i>I. barabini</i> , Morton? pl. xv, figs. 3, 5. ....                             | 75-76 |
| <i>I. sagensis</i> , Owen, pl. xiv, fig. 15, and pl. xv, figs. 1, 2. ....         | 76-78 |
| <i>I. sagensis</i> var. <i>quadrans</i> , Whitfield, 1885, pl. xiv, fig. 16. .... | 79    |
| <i>I. perovalis</i> , Conrad, pl. xv, fig. 6. ....                                | 80    |
| <i>I. pro-obliquus</i> , n. s., Whitfield, 1885, pl. xiv, fig. 17. ....           | 80-81 |

*Pinnidæ.*

|                                                        |       |
|--------------------------------------------------------|-------|
| <i>Pinna</i> , Linn. ....                              | 81    |
| <i>P. laqueata</i> , Conrad, pl. xvi, figs. 1, 2. .... | 81-82 |

*Dumyaria.*

*Arcidæ.*

|                                                                      |        |
|----------------------------------------------------------------------|--------|
| <i>Arca</i> , Linn. ....                                             | 82     |
| <i>A. altirostris</i> , Gabb, 1861, pl. xii, figs. 22, 23. ....      | 82-83  |
| <i>Nemodon</i> , Conrad. ....                                        | 83     |
| <i>N. enfaulensis</i> , Gabb, pl. xii, figs. 3-5. ....               | 83-84  |
| <i>N. angulatum</i> , Gabb, 1860, pl. xii, figs. 6, 7. ....          | 84-85  |
| <i>N. brevifrons</i> , Conrad, pl. xii, figs. 1, 2. ....             | 85-86  |
| <i>Nemoarca</i> , Conrad, 1870. ....                                 | 86     |
| <i>N. cretacea</i> , Conrad, 1870, pl. xii, figs. 8-10. ....         | 86-87  |
| <i>Breniarca</i> , Conrad. ....                                      | 87     |
| <i>B. saffordi</i> , Gabb, pl. xii, figs. 11, 12. ....               | 87-88  |
| <i>Trigonarca</i> , Conrad, 1862. ....                               | 88     |
| <i>T. canaliciformis</i> , Conrad, pl. xii, figs. 17, 18. ....       | 88-89  |
| <i>T. transversa</i> , Gabb, 1861, pl. xii, figs. 13-16. ....        | 89-91  |
| <i>Cibota</i> , Browne. ....                                         | 91     |
| <i>C. rostellata</i> , Morton, pl. xi, figs. 34-36. ....             | 91-92  |
| <i>C. uniopsis</i> , Conrad, pl. xi, figs. 32, 33. ....              | 92-93  |
| <i>C. obesa</i> , n. s., Whitfield, 1885, pl. xi, figs. 30, 31. .... | 93-94  |
| <i>C. multiradiata</i> , Gabb, 1860, pl. xi, figs. 21, 22. ....      | 94     |
| <i>Idonearca</i> , Conrad, 1872. ....                                | 95     |
| <i>I. tippiana</i> , Conrad, pl. xii, figs. 19-21. ....              | 95-96  |
| <i>I. antrosa</i> , Morton, pl. xiii, figs. 6-11. ....               | 96-98  |
| <i>I. vulgaris</i> , Morton, pl. xiii, figs. 1-5. ....               | 98-99  |
| <i>Azinea</i> , Poli. ....                                           | 99     |
| <i>A. mortoni</i> , Conrad, pl. xi, figs. 23-25. ....                | 99-101 |
| <i>A. alba</i> , n. s., Whitfield, 1885, pl. xi, figs. 26-29. ....   | 101    |

*Nuculidæ.*

|                                                                        |         |
|------------------------------------------------------------------------|---------|
| <i>Nucula</i> , Lam. ....                                              | 102     |
| <i>N. percrassa</i> , Conrad, pl. xi, figs. 4-6. ....                  | 102     |
| <i>N. monmouthensis</i> , n. s., Whitfield, 1885, pl. xi, fig. 1. .... | 102-103 |
| <i>N. stackiana</i> , Gabb, pl. xi, figs. 2, 3. ....                   | 103-104 |
| <i>N. perequalis</i> , Conrad. ....                                    | 104-105 |
| <i>Nuculana</i> , Link. ....                                           | 105     |
| <i>N. protexta</i> , Gabb, pl. xi, fig. 10. ....                       | 105-106 |
| <i>N. gabbana</i> , n. s., Whitfield, 1885, pl. xi, figs. 11-13. ....  | 106-107 |
| <i>N. longifrons</i> , Conrad, pl. xi, figs. 16, 17. ....              | 107-108 |



|                                                                                                                | Page.   |
|----------------------------------------------------------------------------------------------------------------|---------|
| <i>N. pinnaformis</i> , Gabb, pl. xi, figs. 7, 8 .....                                                         | 108-109 |
| <i>N. compressifrons</i> , Conrad, pl. xi, fig. 9 .....                                                        | 109     |
| <i>Perrisonota</i> , Conrad .....                                                                              | 110     |
| <i>P. proteata</i> , Conrad, pl. xi, figs. 14, 15 .....                                                        | 110     |
| <i>Nucularia</i> , Conrad .....                                                                                | 111     |
| <i>N. papyria</i> , Conrad, pl. xi, figs. 18-20 .....                                                          | 111-112 |
| <i>Trigonidæ</i> .                                                                                             |         |
| <i>Trigonia</i> , Brug. ....                                                                                   | 112     |
| <i>T. mortoni</i> , n. s., Whitfield, 1885, pl. xiv, figs. 5, 6 .....                                          | 112-113 |
| <i>T. eufaulensis</i> , Gabb, pl. xiv, figs. 1-4 .....                                                         | 113-114 |
| <i>T. cerulea</i> , n. s., Whitfield, 1885, pl. xiv, fig. 7 .....                                              | 114-115 |
| <i>Siphonida</i> .                                                                                             |         |
| <i>Integripalliata</i> .                                                                                       |         |
| <i>Crassatellidæ</i> .                                                                                         |         |
| <i>Crassatella</i> , Lam. ....                                                                                 | 115-116 |
| <i>C. vadosa</i> , Morton ?, pl. xvii, figs. 12-15 .....                                                       | 116-117 |
| <i>C. cuneata</i> , Gabb, pl. xvii, figs. 18-20 .....                                                          | 118-119 |
| <i>C. delawarensis</i> , Gabb .....                                                                            | 119     |
| <i>C. monmouthensis</i> , Gabb, pl. xvii, figs. 21, 22 .....                                                   | 119-120 |
| <i>C. prora</i> , Conrad, pl. xvii, figs. 10, 11 .....                                                         | 120-121 |
| <i>C. subplana</i> , Conrad, pl. xviii, figs. 14-16 .....                                                      | 121-122 |
| <i>C. transversa</i> , Gabb, 1861, pl. xvii, figs. 16, 17 .....                                                | 122-123 |
| <i>Scambula</i> , Conrad, 1869 .....                                                                           | 123     |
| <i>S. perplana</i> , Conrad, pl. xviii, figs. 8-10 .....                                                       | 123-124 |
| <i>Astartidæ</i> .                                                                                             |         |
| <i>Gouldia</i> , Ad .....                                                                                      | 124     |
| <i>G. decemnaria</i> , Conrad, pl. xviii, fig. 4 .....                                                         | 124-125 |
| <i>G. conradi</i> , n. s., Whitfield, 1885, pl. xviii, figs. 1-3 .....                                         | 125-126 |
| <i>G. declivis</i> , Conrad, pl. xviii, fig. 11 .....                                                          | 126     |
| <i>G. paralis</i> , Conrad, pl. xviii, figs. 12, 13 .....                                                      | 126-127 |
| <i>Vetericardia</i> , Conrad, 1872 .....                                                                       | 127     |
| <i>V. octolirata</i> , Gabb .....                                                                              | 127-128 |
| <i>V. crenulirata</i> , Lea, 1861, pl. xviii, figs. 5-7 .....                                                  | 128-129 |
| <i>Lucinidæ</i> .                                                                                              |         |
| <i>Lucina</i> , Brug. ....                                                                                     | 129     |
| <i>L. cretacea</i> , Conrad, pl. xviii, figs. 23-25 .....                                                      | 129-130 |
| <i>L. smockana</i> , n. s., Whitfield, 1885, pl. xviii, figs. 21, 22 .....                                     | 130-131 |
| <i>Ohamidæ</i> .                                                                                               |         |
| <i>Diceras</i> , Lam. ....                                                                                     | 131     |
| <i>D. dactyloides</i> , n. s., Whitfield, 1885, pl. xviii, figs. 26, 27 .....                                  | 131     |
| <i>Cardiidæ</i> .                                                                                              |         |
| <i>Cardium</i> , Linn. ....                                                                                    | 132     |
| <i>C. eufaulensis</i> , Conrad, pl. xx, figs. 17-19 .....                                                      | 132     |
| <i>C. ripleyanum</i> , Conrad, pl. xx, fig. 14 .....                                                           | 132-133 |
| <i>C. ripleyense</i> , Conrad .....                                                                            | 133     |
| <i>Oriocardium</i> , Conrad, 1870 .....                                                                        | 133     |
| <i>Cardium (Oriocardium) dumosum</i> , Conrad, pl. xx, figs. 9-13 .....                                        | 133-135 |
| <i>Cardium (Oriocardium) multiradiatum</i> , Gabb, pl. xxi, figs. 1-3 .....                                    | 135-136 |
| <i>Protocardium</i> , Beyrich .....                                                                            | 136     |
| <i>C. (Protocardium) perelongatum</i> , n. s., Whitfield, 1885, pl. xx, figs. 20-22; pl. xxi, figs. 4, 5 ..... | 136-138 |
| <i>Pachycardium</i> , Conrad, 1870 .....                                                                       | 138     |
| <i>P. burlingtonense</i> , n. s., Whitfield, 1885, pl. xxi, figs. 6, 7 .....                                   | 138     |
| <i>Fulvia</i> , Grey, 1847 .....                                                                               | 139     |
| <i>F. tenuis</i> , n. s., Whitfield, 1885, pl. xx, fig. 8 .....                                                | 139     |
| <i>Fragum</i> , Bolton .....                                                                                   | 139     |
| <i>F. tenuistriatum</i> , n. s., Whitfield, 1885, pl. xx, figs. 15, 16 .....                                   | 139-140 |
| <i>Leiopistha</i> , Meek .....                                                                                 | 140     |
| <i>L. proteata</i> , Conrad, pl. xx, figs. 1-3 .....                                                           | 140-141 |
| <i>L. elegantula</i> , Roemer .....                                                                            | 141-142 |
| <i>L. inflata</i> , n. s., Whitfield, 1885, pl. xx, figs. 4, 5 .....                                           | 142     |
| <i>Cymella</i> , Meek .....                                                                                    | 142     |
| <i>C. meeki</i> , Whitfield, pl. xx, figs. 6, 7 .....                                                          | 142-143 |
| <i>Cyprinidæ</i> .                                                                                             |         |
| <i>Veniella</i> , Stoliczka .....                                                                              | 144     |
| <i>V. conradi</i> , Morton, pl. xix, figs. 8-10 .....                                                          | 144-145 |

|                                                                           | Page.   |
|---------------------------------------------------------------------------|---------|
| <i>V. decisa</i> , Morton, pl. xix, figs. 15, 16.....                     | 145-147 |
| <i>V. inflata</i> , Conrad, pl. xix, figs. 4, 5.....                      | 147-148 |
| <i>V. elevata</i> , Conrad, pl. xix, figs. 6, 7.....                      | 148-149 |
| <i>V. trigona</i> , Gabb, 1861, pl. xix, figs. 11-14.....                 | 149-150 |
| <i>V. subovalis</i> , Conrad, pl. xix, figs. 1, 2.....                    | 150-151 |
| <i>V. trapezoidea</i> , Conrad, pl. xix, fig. 3.....                      | 151-152 |
| <i>Sphaeriola</i> , Stoliczka.....                                        | 152     |
| <i>S. umbonata</i> , n. s., Whitfield, 1885, pl. xix, figs. 17, 18.....   | 152     |
| <i>Sinuopalliatæ.</i>                                                     |         |
| <i>Veneridæ.</i>                                                          |         |
| <i>Callista</i> , Poli.....                                               | 153     |
| <i>C. delawarensis</i> , Gabb, pl. xxii, figs. 8-10.....                  | 153-154 |
| <i>Aphrodina</i> , Conrad, 1868.....                                      | 154     |
| <i>A. tippiana</i> , Conrad, pl. xxii, figs. 6, 7.....                    | 154-155 |
| <i>Cyprineria</i> , Conrad, 1864.....                                     | 156     |
| <i>C. depressa</i> , Conrad, pl. xxii, figs. 11-13.....                   | 156-157 |
| <i>C. densata</i> , Conrad, pl. xxii, figs. 19-21.....                    | 157-158 |
| <i>C. excavata</i> , Morton, pl. xxii, figs. 16, 17.....                  | 159-160 |
| <i>C. heilprini</i> , n. s., Whitfield, 1885, pl. xxii, figs. 14, 15..... | 160     |
| <i>C. spissa</i> , Conrad, pl. xxii, fig. 18.....                         | 160-161 |
| <i>Dosinia</i> , Scopoli.....                                             | 161     |
| <i>D. gabbi</i> , n. s., Whitfield, 1885, pl. xxii, figs. 4, 5.....       | 161-162 |
| <i>D. erecta</i> , n. s., Whitfield, 1885, pl. xviii, figs. 17-20.....    | 162-163 |
| <i>Tenea</i> , Conrad, 1871.....                                          | 163     |
| <i>T. pinquis</i> , Conrad, pl. xxii, figs. 1-3.....                      | 163-164 |
| <i>Tellinidæ.</i>                                                         |         |
| <i>Tellimera</i> , Conrad, 1871.....                                      | 164     |
| <i>T. eborea</i> , Conrad, pl. xxiii, figs. 12, 13.....                   | 164-165 |
| <i>Linearia</i> , Conrad, 1871.....                                       | 165     |
| <i>L. metastriata</i> , Conrad, pl. xxiii, figs. 6-8.....                 | 165-166 |
| <i>L. contracta</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 5.....      | 167     |
| <i>Æoru</i> , Conrad, 1871.....                                           | 167     |
| <i>Æ. cretacea</i> , Conrad, pl. xxiii, figs. 16, 17.....                 | 167-168 |
| <i>Ænona</i> , Conrad, 1871.....                                          | 168     |
| <i>Æ. eufulensis</i> , Conrad, pl. xxiii, figs. 2, 3.....                 | 168-169 |
| <i>Æ. papyria</i> , Conrad, pl. xxiii, fig. 4.....                        | 169-170 |
| <i>Corimya</i> , Agassiz.....                                             | 170     |
| <i>C. tennis</i> , n. s., Whitfield, 1885, pl. xxiii, figs. 9-11.....     | 170-171 |
| <i>Donacindæ.</i>                                                         |         |
| <i>Donax</i> , Linn.....                                                  | 171     |
| <i>D. fordii</i> , Conrad, pl. xxiii, fig. 1.....                         | 171-172 |
| <i>Mactridæ.</i>                                                          |         |
| <i>Vclada</i> , Conrad, 1871.....                                         | 172     |
| <i>V. lutea</i> , Conrad, pl. xxiii, figs. 18-21.....                     | 172-173 |
| <i>V. tellinoides</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 23.....   | 173-174 |
| <i>V. transversa</i> , n. s., Whitfield, 1885, pl. xxiii, fig. 22.....    | 174     |
| <i>Anatinidæ.</i>                                                         |         |
| <i>Pholadomya</i> , Sowerby.....                                          | 175     |
| <i>P. occidentalis</i> , Morton, pl. xxiv, figs. 1-3.....                 | 175-176 |
| <i>P. roemeri</i> , n. s., Whitfield, 1885, pl. xxiv, fig. 4.....         | 176-177 |
| <i>Periplomya</i> , Conrad.....                                           | 177     |
| <i>P. elliptica</i> , Gabb, 1861, pl. xxiii, figs. 14, 15.....            | 177-178 |
| <i>Cercomya</i> , Agassiz.....                                            | 178     |
| <i>C. peculiaris</i> , Conrad, pl. xxiii, figs. 24, 25.....               | 178     |
| <i>Corbulidæ.</i>                                                         |         |
| <i>Corbula</i> , Bruguière.....                                           | 178     |
| <i>C. crassiplica</i> , Gabb, pl. xxiii, fig. 30.....                     | 178-179 |
| <i>C. foulkei</i> , Lea, 1861, pl. xxiii, figs. 27-29.....                | 180     |
| <i>C. subcompressa</i> , Gabb, pl. xxiii, fig. 26.....                    | 180-181 |
| <i>Saxicavidæ.</i>                                                        |         |
| <i>Panopea</i> , Ménard.....                                              | 181     |
| <i>P. decisa</i> , Conrad, pl. xxiv, figs. 5-8.....                       | 181-182 |
| <i>Solenidæ.</i>                                                          |         |
| <i>Solyma</i> , Conrad, 1871.....                                         | 182     |
| <i>S. lineolata</i> , Conrad, pl. xxv, figs. 11-13.....                   | 182-183 |

|                                                                                                | Page.   |
|------------------------------------------------------------------------------------------------|---------|
| <i>Leptosolen</i> , Conrad, pl. xxv, figs. 1-2 .....                                           | 183-184 |
| <i>Legumen</i> , Conrad, 1858 .....                                                            | 184     |
| <i>L. planulatum</i> , Conrad, xxv, figs. 3-4 .....                                            | 184-185 |
| <i>L. appressum</i> , Conrad, pl. xxv, figs. 6-8 .....                                         | 185-186 |
| <i>Siliqua</i> , Muhlfeld .....                                                                | 186     |
| <i>S. cretacea</i> , Gabb, pl. xxv, figs. 9, 10 .....                                          | 186-187 |
| <i>Pholadidae</i> .                                                                            |         |
| <i>Pholas</i> , Linn. ....                                                                     | 187     |
| <i>P. cithara</i> , Morton, pl. xxv, 14-16 .....                                               | 187-188 |
| <i>P. ? lata</i> , n. s., Whitfield, 1885, pl. xxv, fig. 17 .....                              | 189-190 |
| <i>Martesia</i> , Leach .....                                                                  | 190     |
| <i>M. (Pholas) cretacea</i> , Gabb, pl. xxv, figs. 20-23 .....                                 | 190     |
| <i>Teredidae</i> .                                                                             |         |
| <i>Teredo</i> , Linn. ....                                                                     | 191     |
| <i>T. irregularis</i> , Gabb, pl. xxv, figs. 18, 19 .....                                      | 191-192 |
| <i>Gastrochenidae</i> .                                                                        |         |
| <i>Olavagella</i> , Lam. ....                                                                  | 192     |
| <i>C. armata</i> , Morton, pl. xxv, fig. 24 .....                                              | 192-193 |
| Section iv.—Lamellibranchiata from the Middle Marl Beds.                                       |         |
| <i>Ostreidae</i> .                                                                             |         |
| <i>Gryphæa</i> , Lam. ....                                                                     | 194     |
| <i>G. vesicularis</i> , Lam., pl. xxvi, figs. 9, 10 .....                                      | 194     |
| <i>G. bryani</i> , var. <i>precedens</i> , n. var., Whitfield, 1885, pl. xxvi, figs. 7-8 ..... | 194-195 |
| <i>Gryphæostrea</i> , Conrad .....                                                             | 195     |
| <i>G. vomer</i> , Morton, pl. xxvi, figs. 11-12 .....                                          | 195-196 |
| <i>Mytilidae</i> .                                                                             |         |
| <i>Modiola</i> , Lam. ....                                                                     | 197     |
| <i>M. ovata</i> , Gabb, pl. xxvi, figs. 13-14 .....                                            | 197     |
| <i>M. (Lithodomus?) inflata</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 1-2 .....            | 197-198 |
| <i>Pteriidae</i> , Meek.                                                                       |         |
| <i>Pinna</i> , Linn. ....                                                                      | 198     |
| <i>P. rostriformis</i> , Morton, pl. xvi, figs. 3-4 .....                                      | 198     |
| <i>Arcidae</i> .                                                                               |         |
| <i>Idonearca</i> , Conrad .....                                                                | 199     |
| <i>I. medians</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 5-6 .....                          | 199     |
| <i>I. compressirostra</i> , n. s., Whitfield, 1885, pl. xxvi, figs. 15-16 .....                | 199-200 |
| <i>Isocardiidae</i> .                                                                          |         |
| <i>Isocardia</i> , Lamarck .....                                                               | 200     |
| <i>I. conradi</i> , Gabb, pl. xxvi, figs. 3-4 .....                                            | 200-201 |
| <i>Teredidae</i> .                                                                             |         |
| <i>Teredo</i> , Linnaeus .....                                                                 | 201     |
| <i>T. tibialis</i> , Morton, pl. xxvi, figs. 19-22 .....                                       | 201-203 |
| <i>Gastrochenidae</i> .                                                                        |         |
| <i>Gastrochena</i> , Spengl. ....                                                              | 203     |
| <i>G. americana</i> , Gabb, pl. xxvi, figs. 17-18 .....                                        | 203-204 |
| Section V.—Lamellibranchiata from the lower layers of the Upper Marl Beds of New Jersey.       |         |
| <i>Ostreidae</i> .                                                                             |         |
| <i>Ostrea</i> , Linnaeus .....                                                                 | 205     |
| <i>O. glandiformis</i> , n. s., Whitfield, 1885, pl. xxvii, figs. 1-5 .....                    | 205-206 |
| <i>Gryphæa</i> , Sow .....                                                                     | 206     |
| <i>G. bryani</i> , Gabb, 1876, pl. xxvii, figs. 6-9 .....                                      | 206-207 |
| <i>Mytilidae</i> .                                                                             |         |
| <i>Modiola</i> , Lam. ....                                                                     | 207     |
| <i>M. johnsoni</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 8, 9 .....                      | 207     |
| <i>Arcidae</i> .                                                                               |         |
| <i>Arca</i> , Linn. ....                                                                       | 208     |
| <i>A. quindecemradiata</i> , Gabb, 1860, pl. xxvii, figs. 10-13 .....                          | 208     |
| <i>Astartidae</i> .                                                                            |         |
| <i>Cardita</i> , Brug. ....                                                                    | 209     |
| <i>C. intermedia</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 14, 15 .....                  | 209     |
| <i>Crassatella</i> , Lamarck .....                                                             | 209     |
| <i>C. conradi</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 1-5 .....                        | 209-210 |
| <i>C. delawarensis</i> , Gabb, pl. xxvii, figs. 14, 15 .....                                   | 210-211 |



|                                                                                                 | Page.   |
|-------------------------------------------------------------------------------------------------|---------|
| <i>O. littoralis</i> , Conrad, pl. xxviii, figs. 6, 7 .....                                     | 212-213 |
| <i>O. rhombea</i> , n. s., Whitfield, 1885, pl. xxvii, figs. 16-19 .....                        | 213-214 |
| <i>Cardiidae</i> .                                                                              |         |
| <i>Criocardium</i> , Conrad .....                                                               | 214     |
| <i>C. nucleolus</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 10, 11 .....                    | 214-215 |
| <i>Cyprinidae</i> .                                                                             |         |
| <i>Veniella</i> , Stoliczka .....                                                               | 215     |
| <i>V. rhomboidea</i> , Conrad, pl. xxviii, figs. 12, 13 .....                                   | 215-216 |
| <i>Petricolidæ</i> .                                                                            |         |
| <i>Petricola</i> , Lam. ....                                                                    | 216     |
| <i>P. nova-ægyptica</i> , n. s., Whitfield, 1885, pl. xxviii, fig. 22 .....                     | 216-217 |
| <i>Mactridæ</i> .                                                                               |         |
| <i>Veleda</i> , Conrad, 1871 .....                                                              | 217     |
| <i>V. nasuta</i> , n. s., Whitfield, 1885, pl. xxviii, fig. 23 .....                            | 217     |
| <i>Veneridæ</i> .                                                                               |         |
| <i>Caryatis</i> , Roemer .....                                                                  | 218     |
| <i>C. ? reta</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 16-19 .....                        | 218-219 |
| <i>Saxicavidae</i> .                                                                            |         |
| <i>Panopæa</i> , Ménard. ....                                                                   | 219     |
| <i>P. elliptica</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 24, 25 .....                    | 219-220 |
| <i>Anatinidæ</i> .                                                                              |         |
| <i>Periplomya</i> , Conrad .....                                                                | 220     |
| <i>P. truncata</i> , n. s., Whitfield, 1885, pl. xxviii, figs. 20, 21 .....                     | 220-221 |
| Section VI.—Lamellibranchiata from the Eocene marls of New Jersey.                              |         |
| <i>Ostreidæ</i> .                                                                               |         |
| <i>Ostrea</i> , Linnæus .....                                                                   | 222     |
| <i>O. glauconoides</i> , n. s., Whitfield, 1885, pl. xxix, fig. 2 .....                         | 222-223 |
| <i>O. (Alectrionia?) linguafelis</i> , n. s., Whitfield, 1885, pl. xxix, fig. 1 .....           | 223     |
| <i>Gryphæa</i> , Lam. ....                                                                      |         |
| <i>G. vesicularis</i> , Lam., pl. xxix, figs. 7, 8 .....                                        | 224     |
| <i>Pectenidæ</i> .                                                                              |         |
| <i>Pecten</i> , Klein .....                                                                     | 224     |
| <i>P. kneiskerni</i> , Conrad, pl. xxix, figs. 3-5 .....                                        | 224-226 |
| <i>P. rigbyi</i> , n. s., Whitfield, 1885, pl. xxix, fig. 6 .....                               | 226     |
| <i>Aricula annosa</i> , Conrad, pl. xxix, fig. 9 .....                                          | 226-227 |
| <i>Nuculidæ</i> .                                                                               |         |
| <i>Nucula</i> , Lam. ....                                                                       | 227     |
| <i>N. circe</i> , n. s., Whitfield, 1885, pl. xxix, fig. 12 .....                               | 227-228 |
| <i>Nuculana</i> , Mörch .....                                                                   | 228     |
| <i>N. albaria</i> , Conrad, pl. xxix, figs. 15, 16 .....                                        | 228-229 |
| <i>Nucularia</i> , Conrad .....                                                                 | 229     |
| <i>N. secunda</i> , n. s., Whitfield, 1885, pl. xxix, figs. 13, 14 .....                        | 229-230 |
| <i>Azinea</i> , Poli .....                                                                      | 230     |
| <i>A. conradi</i> , n. s., Whitfield, 1885, pl. xxix, figs. 10, 11 .....                        | 230     |
| <i>Astartidæ</i> .                                                                              |         |
| <i>Astarte</i> , Sowerby .....                                                                  | 231     |
| <i>A. castanella</i> , n. s., Whitfield, 1885, pl. xxx, figs. 1, 2 .....                        | 231     |
| <i>A. planimarginata</i> , n. s., Whitfield, 1885, pl. xxx, figs. 3, 4 .....                    | 232     |
| <i>Cardita</i> , Brug. ....                                                                     | 232     |
| <i>C. perantiqua</i> , Conrad, pl. xxx, figs. 8-10 .....                                        | 232-233 |
| <i>C. brittoni</i> , n. s., Whitfield, 1885, pl. xxx, figs. 11, 12 .....                        | 233-234 |
| <i>Crassatella</i> , Lam. ....                                                                  | 234     |
| <i>C. alta</i> , Conrad, pl. xxix, fig. 17 .....                                                | 234-235 |
| <i>C. obliquata</i> , n. s., Whitfield, 1885, pl. xxix, fig. 18, and pl. 30, figs. 13, 14 ..... | 235-236 |
| <i>Cardiidae</i> .                                                                              |         |
| <i>Protoocardium</i> , Beyr. ....                                                               | 236     |
| <i>P. curtum</i> , Conrad, 1870, pl. xxx, figs. 5-7 .....                                       | 236-237 |
| <i>Veneridæ</i> .                                                                               |         |
| <i>Caryatis</i> , Roemer .....                                                                  | 237     |
| <i>C. ovalis</i> , n. s., Whitfield, 1885, pl. xxx, figs. 15, 16 .....                          | 237-238 |
| <i>Mactridæ</i> .                                                                               |         |
| <i>Veleda</i> , Conrad, 1871 .....                                                              | 238     |
| <i>V. equilatera</i> , n. s., Whitfield, 1885, pl. xxx, fig. 17 .....                           | 238-239 |



|                                                                                                              | Page    |
|--------------------------------------------------------------------------------------------------------------|---------|
| <i>Corbulidæ.</i>                                                                                            |         |
| <i>Corbula</i> , Brug. ....                                                                                  | 239     |
| <i>O. (Neæra) nasutoides</i> , n. s., Whitfield, 1885, pl. xxx, figs. 18, 19. ....                           | 239-240 |
| <i>Neæra</i> , Grey. ....                                                                                    | 240     |
| <i>N. æquivalvis</i> , n. s., Whitfield, 1885, pl. xxx, figs. 20, 21. ....                                   | 240-241 |
| <i>Pholadidæ.</i>                                                                                            |         |
| <i>Parapholas</i> , Conrad, 1848. ....                                                                       | 241     |
| <i>P. kneiskerni</i> , n. s., Whitfield, 1885, pl. xxx, figs. 22-24. ....                                    | 241-242 |
| <i>Terididæ.</i>                                                                                             |         |
| <i>Teredo</i> , Linn. ....                                                                                   | 242     |
| <i>T. emacerata</i> , n. s., Whitfield, 1885, pl. xxx, fig. 25. ....                                         | 242     |
| Section VII.—Unionidæ, from the clays at Fish House, Camden County.                                          |         |
| <i>Unionidæ.</i>                                                                                             |         |
| <i>Unio</i> , Retzius. ....                                                                                  | 244     |
| <i>U. nasutoides</i> , Lea, 1868, pl. xxxiv, figs. 4, 5. ....                                                | 244-245 |
| <i>U. radiatoides</i> , Lea, 1868, pl. xxxiv, figs. 1-3. ....                                                | 245-246 |
| <i>U. subrotundoides</i> , Lea, 1868, pl. xxxii, fig. 5. ....                                                | 246-247 |
| <i>U. cariosoides</i> , Lea, 1868, pl. xxxii, fig. 3. ....                                                   | 247     |
| <i>U. humerosoides</i> , Lea, 1868, pl. xxxi, fig. 4. ....                                                   | 248     |
| <i>U. roanokoides</i> , Lea, 1868, pl. xxxi, fig. 3, and pl. xxxiii, figs. 1, 2, and pl. xxxiv, fig. 7. .... | 248-249 |
| <i>U. ligamentinoides</i> , Lea, 1868, pl. xxxi, fig. 1, and pl. xxxii, fig. 4, and pl. xxxiv, fig. 8. ....  | 249     |
| <i>U. alatoides</i> , Lea, 1868, pl. xxxiii, figs. 3, 4, and pl. xxxiv, fig. 6. ....                         | 249-250 |
| <i>U. præanodontoides</i> , n. s., Whitfield, 1885, pl. xxxi, fig. 2. ....                                   | 250     |
| <i>U. rectoides</i> , n. s., Whitfield, 1885, pl. xxxii, figs. 1, 2. ....                                    | 250-251 |
| <i>Anodonta</i> , Cuvier. ....                                                                               | 251     |
| <i>A. grandoides</i> , Lea, 1868, pl. xxxv, figs. 2, 3. ....                                                 | 251-252 |
| <i>A. corpulentoides</i> , Lea, 1868, pl. xxxv, fig. 1. ....                                                 | 252     |
| Section VIII. Appendix.                                                                                      |         |
| Classified list of the species described in this volume. ....                                                | 253-264 |

## 6.

- WHITFIELD, R. P., and HALL, JAMES. (See Hall, James, and Whitfield, R. P.)  
 WHITFIELD, R. P., and WHITE, C. A. (See White, C. A., and Whitfield, R. P.)

# SUPPLEMENT.

## THE WRITINGS OF J. W. BAILEY.

BAILEY, J. W. Notes concerning the minerals and fossils collected by Lieutenant J. W. Abert, while engaged in the geographical examination of New Mexico. <Rep. of Lieut. J. W. Abert of his Examination of New Mexico in the years 1846-'47. Ex. Doc. No. 41, pp. 547-548, and 3 plates. Washington [1849].

Plate [I] faces p. 522, and contains fossil leaves from the coal beds of the Raton.

Plate [II] faces p. 546, and contains sharks' teeth and some *Gasteropoda* from Poblazon and an [*Athyris*] from Tuerto.

Plate [III] faces p. 547, and contains an *Inoceramus* [*problematicus*] and a fossil leaf from the coal bed at Raton.

## THE WRITINGS OF I. N. NICOLLET.

NICOLLET, I. N. List of Fossils belonging to the several formations alluded to in the Report; arranged according to localities. <Rep. intended to illustrate a Map of the Hydrographical basin of the Upper Mississippi river made by I. N. Nicollet. 26th Congress, 2d session, Senate Ex. Doc. No. 237. Appendix C, pp. 167-170. Washington, 1843.

|                                                      | Page. |
|------------------------------------------------------|-------|
| <i>Atrypa lingulata</i> , n. s., Nicollet, 1843..... | 167   |
| <i>Ostrea congesta</i> , Conrad .....                | 169   |

A large number of fossils are mentioned by their generic names and said to be new species, but no specific name is given and they are not described.

## THE WRITINGS OF HIRAM A. PROUT.

### 1.

PROUT, H. A. Description of New Species of Bryozoa from Texas and New Mexico, collected by Dr. George G. Shumard, Geologist of the U. S. Expedition for Boring Artesian Wells along the 32d Parallel, under the direction of Capt. John Pope, U. S. Corps Top. Eng. <Trans. St. Louis Acad. Sci., vol. i, pp. 223-235. 1858. St. Louis, 1856-'60.

|                                                                | Page.   |
|----------------------------------------------------------------|---------|
| <i>Fenestella trituberculata</i> , n. s., Prout, 1858.....     | 228-229 |
| <i>Fenestella popeana</i> , n. s., Prout, 1858 .....           | 229-230 |
| <i>Fenestella corticata</i> , n. s., Prout, 1858 .....         | 230     |
| <i>Fenestella intermedia</i> , n. s., Prout, 1858 .....        | 231     |
| <i>Fenestella variabilis</i> , n. s., Prout, 1858 .....        | 231-232 |
| <i>Fenestella shumardii</i> , n. s., Prout, 1858 .....         | 232     |
| <i>Fenestella norwoodiana</i> , n. s., Prout, 1858 .....       | 233     |
| <i>Fenestella subretiformis</i> , n. s., Prout, 1858 .....     | 233-234 |
| <i>Eschara</i> ? <i>concentrica</i> , n. s., Prout, 1858 ..... | 234     |
| <i>Eschara</i> ? <i>tuberculata</i> , n. s., Prout, 1858 ..... | 234-235 |

## 2.

PROUT, H. A. Second Series of Descriptions of Bryozoa from the Palæozoic Rocks of the Western States and Territories. <Trans. St. Louis Acad. Sci., vol. i, pp. 266-273, pl. xvi, figs. 2 a, b. 1858. St. Louis, 1856-'60.

## PERMIAN SPECIES.

|                                                                            | Page.   |
|----------------------------------------------------------------------------|---------|
| <i>Polypora mexicana</i> , n. s., Prout, 1858, pl. xvi, figs. 2 a, b ..... | 270-271 |

## THE WRITINGS OF BENJAMIN F. SHUMARD.

SHUMARD, B. F. Paleontology. <Rep. of a geological exploration from Fort Leavenworth to Bryan's Pass, made in connection with the survey of a road from Fort Riley to Bridger's Pass, under command of Lieutenant F. T. Bryan, topographical engineer, 1856, by H. Engelmann, geologist and mining engineer. <Rep. of the Secretary of War. Message from the President of the U. S. to the 35th Congress, 1st session, Ex. Doc. No. 2, vol. ii, pp. 517-520. Washington, 1857.

Gives two lists and notes of fossils, and describes one new species *Mytilus engelmanni*.

## FOSSILS OF THE COAL MEASURES.

|                                                        | Page.   |
|--------------------------------------------------------|---------|
| <i>Brachiopoda.</i>                                    |         |
| <i>Productus splendens</i> , Norwood & Pratten .....   | 518     |
| <i>Productus villiersi</i> , D'Orbigny .....           | 518     |
| <i>Productus nebrascensis</i> , Owen, D. D .....       | 518     |
| <i>Productus æquicostatus</i> , Shumard .....          | 518     |
| <i>Productus semireticulatus</i> , Mart., sp .....     | 518     |
| <i>Chonetes smithii</i> , Norwood & Pratten .....      | 518     |
| <i>Terebratula ? subtilita</i> , Hall .....            | 518     |
| <i>Spirifer plano-conveza</i> , Shumard .....          | 518     |
| <i>Spirifer meusebachianus</i> , Roemer, F .....       | 518-519 |
| <i>Spirifer kentuckensis</i> , Shumard .....           | 519     |
| <i>Rhynchonella</i> ——— ? .....                        | 519     |
| <i>Atrypa</i> ——— ? .....                              | 519     |
| <i>Orthisina umbraculum ?</i> Buch, sp .....           | 519     |
| <i>Acephala.</i>                                       |         |
| <i>Myalina subquadrata</i> , Shumard .....             | 519     |
| <i>Mytilus engelmanni</i> , n. s., Shumard, 1857 ..... | 519     |
| <i>Arca</i> ——— ? .....                                | 519     |
| <i>Pecten occidentalis</i> , Shumard .....             | 519     |
| <i>Avicula</i> ——— ? .....                             | 519     |

## FOSSILS OF THE CRETACEOUS FORMATION.

|                                                         |     |
|---------------------------------------------------------|-----|
| <i>Ammonites peracultus ?</i> H. & M. ....              | 520 |
| <i>Scaphites mandenensis</i> , Morton, sp .....         | 520 |
| <i>Scaphites nicolleti</i> , Morton, sp .....           | 520 |
| <i>Rostellaria nebrascensis</i> , Evans & Shumard ..... | 520 |
| <i>Ostrea congesta</i> , Conrad .....                   | 520 |
| <i>Inoceramus cripsii</i> , Mantell .....               | 520 |
| <i>Inoceramus barabini</i> , Morton .....               | 520 |
| <i>Inoceramus sagensis ?</i> Owen, D. D .....           | 520 |
| <i>Inoceramus fragilis</i> , H. & M .....               | 520 |
| <i>Inoceramus ten(u)ilineatus</i> , Hall & Meek .....   | 520 |
| <i>Arca shumardi</i> , M. & H .....                     | 520 |
| Vertebral scales and fin bones of fishes .....          | 520 |

# INDEX OF GENERA AND SPECIES.

[The page numbers in heavy type indicate references to the original descriptions.]

| A.                                     | Page.                       |                                                    | Page.                                               |
|----------------------------------------|-----------------------------|----------------------------------------------------|-----------------------------------------------------|
| <i>Abra?</i> <i>formosa</i> .....      | 48                          | <i>Actæon</i> <i>intercalaris</i> .....            | <b>94</b>                                           |
| <i>Acambona</i> .....                  | <b>119</b>                  | <i>melanellus</i> .....                            | 221                                                 |
| <i>pinna</i> .....                     | 129                         | <i>pygmæus</i> .....                               | 221                                                 |
| <i>Acanthocardium</i> .....            | 99                          | ( <i>Solidula</i> ) <i>attenuata</i> .....         | <b>18</b>                                           |
| <i>Acanthocladia americana</i> .....   | 19, 257                     | <i>striatus</i> .....                              | 221                                                 |
| <i>Acanthotelson</i> .....             | <b>36</b> , 46, 53, 61, 179 | <i>subellipticus</i> .....                         | <b>14</b> , 101                                     |
| <i>eveni</i> .....                     | <b>53</b> , 61, 179         | <i>woosteri</i> .....                              | <b>143</b>                                          |
| <i>inæqualis</i> .....                 | <b>36</b> , 46              | <i>Actæonella</i> .....                            | 29, 210                                             |
| <i>stimpsoni</i> .....                 | <b>36</b> , 46, 61, 179     | <i>syriaca</i> .....                               | <b>210</b>                                          |
| <i>Acanthotelsonidæ</i> .....          | 36                          | <i>Actæonema</i> <i>striata</i> .....              | 220                                                 |
| <i>Acar</i> .....                      | 98                          | <i>sulcata</i> .....                               | 220                                                 |
| <i>Acella</i> .....                    | 106, 141, 161               | <i>Actæonidæ</i> .....                             | 101                                                 |
| <i>haldemani</i> .....                 | <b>141</b> , 161            | <i>Actæonina</i> .....                             | 29, 86, 143                                         |
| <i>Acephala</i> .....                  | 225, 232, 255, 258, 274     | <i>biplicata</i> .....                             | 48                                                  |
| <i>Acervularia</i> .....               | 108, 150, 155, 163, 223     | <i>minuta</i> .....                                | 86                                                  |
| <i>adjunctiva</i> .....                | <b>150</b> , 163            | <i>naticoides</i> .....                            | 48                                                  |
| <i>davidsoni</i> .....                 | 155                         | <i>prosocheila</i> .....                           | <b>143</b>                                          |
| <i>pentagona</i> .....                 | 108, 192                    | <i>Actæoninæ</i> .....                             | 29                                                  |
| <i>Acidaspis</i> .....                 | 57, 79, 186                 | <i>Actinaria</i> .....                             | 96, 142, 165                                        |
| <i>ceralepta</i> .....                 | 79                          | <i>Actinoceramus</i> .....                         | 47, 97                                              |
| <i>cincinnatiensis</i> .....           | 79                          | <i>Actinoceras</i> .....                           | 27                                                  |
| <i>crosotus</i> .....                  | 79                          | <i>Actinocrinidæ</i> .....                         | 53, 81                                              |
| <i>humata</i> .....                    | 57                          | <i>Actinocrinites</i> .....                        | 81, 87                                              |
| <i>parvula</i> .....                   | <b>186</b>                  | <i>delicatus</i> .....                             | 81                                                  |
| <i>Acila</i> .....                     | 98                          | <i>longus</i> .....                                | 81                                                  |
| <i>Acis</i> .....                      | 74, 86, 152                 | <i>penicillus</i> .....                            | 81                                                  |
| <i>robusta</i> .....                   | 86                          | <i>sculptilis</i> .....                            | 87                                                  |
| ? <i>stevensoni</i> .....              | <b>152</b>                  | <i>sculptus</i> .....                              | 81                                                  |
| <i>swalloviana</i> .....               | 74                          | <i>Actinocrinus</i> .....                          | 23, 26, 37, 38, 41, 42, 59, 118, 127, 130, 149, 165 |
| <i>Acmæa</i> <i>occidentalis</i> ..... | 102                         | ( <i>Alloprosallocrinus</i> ) <i>euconus</i> ..... | <b>38</b>                                           |
| <i>papillata</i> .....                 | 102                         | ( <i>Amphoracrinus</i> ?) <i>concavus</i> ..       | <b>26</b>                                           |
| <i>parva</i> .....                     | 102                         | <i>subturbidatus</i> .....                         | <b>23</b>                                           |
| <i>Acmæidæ</i> .....                   | 102                         | <i>araneolus</i> .....                             | <b>23</b>                                           |
| <i>Acæli</i> .....                     | 35                          | <i>asteriscus</i> .....                            | <b>23</b>                                           |
| <i>Acrochordiceras</i> .....           | <b>110</b> , <b>239</b>     | ( <i>Batocrinus</i> ) <i>asteriscus</i> .....      | 42                                                  |
| <i>hyatti</i> .....                    | <b>110</b> , <b>239</b>     | <i>dodecadactylus</i> ..                           | 42                                                  |
| <i>Acroloxus</i> .....                 | 106, 161                    | <i>pistilliformis</i> ....                         | 41                                                  |
| <i>minutus</i> .....                   | 106, 161, 169               | <i>pistillus</i> .....                             | 59                                                  |
| <i>Acrothele</i> .....                 | 189, 198                    | <i>calyculus</i> var. <i>pardinensis</i> ...       | 40                                                  |
| ? <i>dichotoma</i> .....               | <b>189</b>                  | <i>concinus</i> .....                              | 42                                                  |
| <i>matthewi</i> .....                  | 198                         | <i>delicatus</i> .....                             | 87                                                  |
| <i>Acrotreta</i> .....                 | 126, 129, 189               | <i>dodecadactylus</i> .....                        | <b>26</b>                                           |
| <i>gemma</i> .....                     | 189                         | <i>evansii</i> .....                               | <b>249</b>                                          |
| <i>pyxidicula</i> .....                | <b>126</b> , 129            | <i>nashvillæ</i> var. <i>subtractus</i> ...        | 118                                                 |
| <i>subsidiua</i> .....                 | <b>126</b> , 129            | <i>pistillus</i> .....                             | <b>37</b>                                           |
| <i>Actæon</i> .....                    | 94, 101, 142                | ( <i>Pradocrinus</i> ?) <i>amplus</i> .....        | <b>26</b>                                           |
| <i>attenuatus</i> .....                | 101                         | <i>pyriformis</i> var. <i>rudis</i> .....          | 26                                                  |
| <i>concinus</i> .....                  | <b>13</b>                   | <i>quadrispinus</i> .....                          | <b>118</b>                                          |
| <i>ellipticus</i> .....                | 50                          |                                                    |                                                     |
| <i>impressa</i> .....                  | <b>220</b>                  |                                                    |                                                     |



|                                                                 | Page.                                            |                                                   | Page.                                                              |
|-----------------------------------------------------------------|--------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------|
| <i>Actinocrinus</i> ( <i>Saccocrinus</i> ?) <i>amplus</i> ..... | 59                                               | <i>Alasmodonta</i> .....                          | 98                                                                 |
| <i>scitulus</i> .....                                           | <b>23</b> , 42                                   | <i>Aleyonaria</i> .....                           | 96                                                                 |
| <i>sillimani</i> .....                                          | <b>26</b> , 42                                   | <i>Alectryonia</i> .....                          | 97, 136, 151, 158                                                  |
| <i>speciosus</i> .....                                          | <b>23</b>                                        | <i>Alethopteris whitneyi</i> .....                | <b>246</b>                                                         |
| ( <i>Sphaerocrinus</i> ) <i>concaus</i> .....                   | 37                                               | <i>Alipes</i> .....                               | 102                                                                |
| <i>unicornicus</i> .....                                        | <b>249</b> , 251                                 | <i>Alloposalocrinus</i> .....                     | 38, 54                                                             |
| <i>validus</i> .....                                            | <b>23</b>                                        | <i>Allorisma</i> .....                            | 32, 45, 61, 73, 86, 89, 90, 132, 138, 147, 149, 163, 165, 178, 241 |
| <i>viaticus</i> .....                                           | <b>127</b> , 130                                 | ? <i>altirostrata</i> .....                       | <b>19</b> , 20                                                     |
| <i>wachsmuthi</i> .....                                         | <b>118</b> , 149, 165                            | <i>audax</i> .....                                | <b>223</b>                                                         |
| <i>Actinopteria</i> .....                                       | 194                                              | <i>capax</i> .....                                | <b>245</b>                                                         |
| <i>boydi</i> .....                                              | 194                                              | ( <i>Cercomyopsis</i> ) <i>pleuropistha</i> ..... | 89                                                                 |
| <i>Actinozoa</i> .....                                          | 129, 130, 131, 136, 138, 144, 147, 158, 163, 192 | ( <i>Chanomya</i> ) <i>hybrida</i> .....          | 61                                                                 |
| <i>Adelophthalmus mazonensis</i> ? .....                        | 53                                               | ? <i>cooperi</i> .....                            | 19, 20                                                             |
| <i>Admete</i> ( <i>Admetopsis</i> ) <i>gregaria</i> .....       | 134                                              | <i>costata</i> .....                              | 86, 90                                                             |
| ? <i>gregaria</i> .....                                         | <b>76</b>                                        | <i>elegans</i> .....                              | 51, 52                                                             |
| ? <i>subfusiformis</i> .....                                    | <b>76</b>                                        | <i>geinitzii</i> .....                            | 86                                                                 |
| ? <i>rhomboides</i> .....                                       | <b>76</b>                                        | ? <i>gilberti</i> .....                           | 147, 163                                                           |
| <i>Admetidæ</i> .....                                           | 135                                              | ? <i>leavenworthensis</i> .....                   | <b>19</b> , 20                                                     |
| <i>Admetopsis</i> .....                                         | 134, 144                                         | <i>marionensis</i> .....                          | <b>138</b> , 165                                                   |
| <i>rhomboides</i> .....                                         | 144                                              | <i>nucula arata</i> .....                         | <b>232</b>                                                         |
| <i>subfusiformis</i> .....                                      | 144                                              | ( <i>Sedgwickia</i> ) <i>geinitzii</i> .....      | 73                                                                 |
| <i>Ænona</i> .....                                              | 269                                              | <i>granosa</i> .....                              | 73                                                                 |
| <i>eufaulensis</i> .....                                        | 269                                              | <i>pleuropistha</i> .....                         | <b>66</b>                                                          |
| <i>papyria</i> .....                                            | 269                                              | <i>reflexa</i> .....                              | <b>73</b>                                                          |
| <i>Æora</i> .....                                               | 269                                              | <i>subelegans</i> .....                           | <b>73</b>                                                          |
| <i>cretacea</i> .....                                           | 269                                              | <i>subcuneata</i> .....                           | <b>19</b> , 20, 32, 73, 149, 178                                   |
| <i>Aganides</i> .....                                           | 104                                              | var .....                                         | 132                                                                |
| <i>Agaricocrinus</i> .....                                      | 26, 82, 83, 154                                  | <i>terminalis</i> .....                           | <b>232</b>                                                         |
| <i>gracilis</i> .....                                           | <b>26</b>                                        | <i>ventricosa</i> .....                           | <b>67</b> , 89                                                     |
| <i>nodosus</i> .....                                            | 82                                               | <i>winchelli</i> .....                            | <b>67</b> , 89                                                     |
| <i>springeri</i> .....                                          | <b>154</b>                                       | <i>Alveolites</i> .....                           | 62, 108, 156                                                       |
| <i>whitfieldi</i> .....                                         | 83                                               | <i>goldfussi</i> .....                            | 156                                                                |
| <i>Agaronia punctulifera</i> .....                              | 222                                              | <i>multilamelia</i> .....                         | <b>108</b>                                                         |
| <i>Agassizocrinus</i> .....                                     | 85, 87, 249, 251                                 | <i>rockfordensis</i> .....                        | 192                                                                |
| <i>carbonaria</i> .....                                         | 85                                               | <i>vallorum</i> .....                             | <b>62</b>                                                          |
| <i>chesterensis</i> .....                                       | 85                                               | <i>Amauropsis</i> .....                           | 102, 264                                                           |
| <i>conicus</i> .....                                            | 85, <b>249</b> , 251                             | <i>paludinæformis</i> .....                       | 102, 264                                                           |
| <i>dactyliformis</i> .....                                      | 255                                              | <i>Ambocælia</i> .....                            | 31, 119                                                            |
| <i>gibbosus</i> .....                                           | 85                                               | ( <i>Spirifer</i> ?) <i>minuta</i> .....          | <b>119</b>                                                         |
| <i>pentagonus</i> .....                                         | 85                                               | <i>Ambonicardia</i> .....                         | <b>266</b>                                                         |
| <i>Agelacrinites</i> .....                                      | 54, 78, 83                                       | <i>cookii</i> .....                               | <b>266</b>                                                         |
| ( <i>Lepidodiscus</i> ) <i>cinnamien-</i>                       |                                                  | <i>Ambonychia</i> .....                           | 55, 56, 79                                                         |
| <i>sis</i> .....                                                | 78                                               | <i>acutirostris</i> .....                         | 56                                                                 |
| <i>squamosus</i> .....                                          | <b>54</b> , 83                                   | <i>carinata</i> .....                             | 232                                                                |
| <i>pileus</i> .....                                             | 78                                               | <i>costata</i> .....                              | 79                                                                 |
| <i>vorticellata</i> .....                                       | 78                                               | <i>intermedia</i> .....                           | <b>55</b>                                                          |
| <i>Agnostus</i> .....                                           | 126, 129, 189, 198, 234                          | ( <i>Megaptera</i> ) <i>alata</i> .....           | <b>68</b> , 79                                                     |
| <i>acadicus</i> .....                                           | 198                                              | <i>casei</i> .....                                | <b>41</b> , 79, 148                                                |
| <i>bidens</i> .....                                             | 189                                              | <i>Ammonites</i> .....                            | 28, 35, 93, 104, 135, 208, 209, 210, 219, 227, 245, 253, 255, 263  |
| <i>communis</i> .....                                           | 189, <b>234</b>                                  | <i>acuto-carinatus</i> .....                      | <b>255</b>                                                         |
| <i>interstricta</i> .....                                       | <b>126</b> , 129                                 | <i>belknapii</i> .....                            | <b>243</b>                                                         |
| <i>neon</i> .....                                               | 189, <b>234</b>                                  | <i>cheyennensis</i> .....                         | <b>250</b>                                                         |
| <i>prolongus</i> .....                                          | 189, <b>234</b>                                  | <i>complexus</i> .....                            | <b>14</b> , 104                                                    |
| <i>richmondensis</i> .....                                      | <b>189</b>                                       | var. <i>suciaensis</i> .....                      | <b>27</b> , 93                                                     |
| <i>seclusus</i> .....                                           | <b>189</b>                                       | <i>cordiformis</i> .....                          | <b>19</b> , 35, 263                                                |
| <i>tumidosus</i> .....                                          | <b>234</b>                                       | var. <i>distans</i> .....                         | 263                                                                |
| <i>Agraulos</i> .....                                           | 31, 190, 199                                     | <i>galpini</i> .....                              | <b>256</b>                                                         |
| <i>Agraulos</i> — ? .....                                       | 31                                               | <i>geniculatus</i> .....                          | <b>219</b>                                                         |
| <i>Agraulos</i> ? <i>globosus</i> .....                         | <b>190</b>                                       | <i>gibbianus</i> .....                            | 243                                                                |
| <i>oweni</i> .....                                              | 31                                               | <i>graysonensis</i> .....                         | 159                                                                |
| <i>quadrangularis</i> .....                                     | 199                                              | <i>halli</i> .....                                | <b>15</b>                                                          |
| <i>Akera</i> .....                                              | 261, 264                                         | <i>henryi</i> .....                               | <b>19</b> , 35                                                     |
| <i>glans-oryza</i> .....                                        | <b>261</b> , 264                                 | <i>levianus</i> .....                             | <b>135</b>                                                         |
| <i>Alaba</i> .....                                              | 102                                              |                                                   |                                                                    |

|                                                            | Page.                   |                                                    | Page.                                                 |
|------------------------------------------------------------|-------------------------|----------------------------------------------------|-------------------------------------------------------|
| <i>Ammonites lenticularis</i> .....                        | 250                     | <i>Anatina claibornensis</i> .....                 | 220                                                   |
| <i>leonensis</i> .....                                     | <b>219</b>              | <i>Anatinidæ</i> .....                             | 30, 32, 34, 100, 109, 111, 134, 261,<br>262, 264, 271 |
| <i>libanensis</i> .....                                    | <b>210</b>              | <i>Anchura</i> .....                               | 94, 102, 111, 127, 134, 137, 143, 264                 |
| <i>marciana</i> .....                                      | <b>255</b>              | <i>biangulata</i> .....                            | 48                                                    |
| <i>moreauensis</i> .....                                   | <b>250</b>              | ( <i>Drepanoch[e]ilus</i> ) <i>americana</i> ..... | 48, 102                                               |
| <i>mullananus</i> .....                                    | <b>29</b>               | <i>decemlirata</i> ...                             | 48                                                    |
| ? <i>mullananus</i> .....                                  | 107                     | <i>mudgeana</i> .....                              | <b>143</b>                                            |
| <i>nebrascensis</i> .....                                  | <b>250</b>              | <i>nebrascensis</i> ..                             | 48, 102,                                              |
| <i>newberryanus</i> .....                                  | <b>17, 93</b>           | 264                                                |                                                       |
| <i>novi-mexicana</i> .....                                 | <b>243</b>              | <i>prolabiata</i> .....                            | 143                                                   |
| <i>opalus</i> .....                                        | <b>250</b>              | <i>rostrata</i> .....                              | 48                                                    |
| <i>peracultus</i> .....                                    | 274                     | <i>ruida</i> .....                                 | 143                                                   |
| <i>percarinatus</i> .....                                  | <b>14, 245</b>          | ? <i>fusiformis</i> .....                          | <b>111, 134</b>                                       |
| <i>peruvianus</i> .....                                    | 243                     | <i>haydeni</i> .....                               | <b>143</b>                                            |
| <i>pickeringi</i> .....                                    | 227                     | <i>newberryi</i> .....                             | <b>94</b>                                             |
| <i>placenta</i> , var. <i>intercalaris</i> ..              | 21                      | <i>nuptialis</i> .....                             | 125, <b>127</b>                                       |
| <i>dekayi</i> , var. <i>intercal-</i><br><i>aris</i> ..... | 135                     | <i>parva</i> .....                                 | 48, 102                                               |
| <i>pleurisepta</i> .....                                   | <b>219</b>              | <i>prolabiata</i> .....                            | <b>137</b>                                            |
| <i>safedensis</i> .....                                    | <b>209</b>              | <i>ruida</i> .....                                 | <b>137</b>                                            |
| ( <i>Scaphites</i> ?) <i>ramosus</i> .....                 | <b>17</b>               | ? <i>sublævis</i> .....                            | 48, 102, 264                                          |
| <i>serrato-carinatus</i> .....                             | <b>66</b>               | <i>Ancillaria elongata</i> .....                   | 222                                                   |
| <i>shumardi</i> .....                                      | <b>243</b>              | <i>Ancillopsis altile</i> .....                    | 222                                                   |
| <i>swallowii</i> .....                                     | 159                     | <i>Ancylidæ</i> .....                              | 106                                                   |
| <i>syriacus</i> .....                                      | <b>208</b>              | <i>Ancylloceras</i> .....                          | 104, 209, 261, 265                                    |
| <i>texanus</i> .....                                       | 219                     | <i>annulatum</i> .....                             | 159                                                   |
| <i>vanconverensis</i> .....                                | <b>27</b>               | ? <i>cheyenensis</i> .....                         | <b>15</b>                                             |
| <i>vermillionensis</i> .....                               | <b>21</b>               | ( <i>Hamites</i> ) <i>uncus</i> .....              | <b>19</b>                                             |
| <i>vespertinus</i> .....                                   | <b>255</b>              | <i>jenneyi</i> .....                               | <b>261, 265</b>                                       |
| <i>Ammonitidæ</i> .....                                    | 35, 104, 135, 263, 265  | ? <i>nebrascensis</i> .....                        | <b>15</b>                                             |
| <i>Amorphozoa</i> .....                                    | 41                      | <i>nicolletii</i> .....                            | <b>14</b>                                             |
| <i>Ampelita</i> .....                                      | 107                     | <i>safedensis</i> .....                            | <b>209</b>                                            |
| <i>Amphicælia</i> .....                                    | 56                      | <i>tricostatus</i> .....                           | <b>261, 265</b>                                       |
| <i>neglecta</i> .....                                      | 56                      | ? <i>uncum</i> .....                               | 104                                                   |
| <i>Amphidiscus armatus</i> .....                           | 229                     | <i>Ancyloceratidæ</i> .....                        | 104                                                   |
| <i>Amphion</i> .....                                       | 191                     | <i>Ancylus</i> .....                               | 112                                                   |
| <i>nevadensis</i> .....                                    | <b>191</b>              | <i>undulatus</i> .....                             | <b>65, 112, 166, 170</b>                              |
| <i>Amphistegina</i> .....                                  | 120                     | <i>Angulus</i> .....                               | 100                                                   |
| <i>Amphora libyca</i> .....                                | 229                     | <i>Animalia</i> .....                              | 229                                                   |
| <i>Amphoraerinus</i> .....                                 | 42, 54, 82              | <i>Anisomyon</i> .....                             | <b>20, 102, 112, 134, 143, 264</b>                    |
| <i>divergens</i> .....                                     | 54, 82                  | <i>alveolus</i> .....                              | 21, 102, 264                                          |
| ? <i>spinobranchiata</i> .....                             | 82                      | <i>borealis</i> .....                              | 21, 102, 134, 264                                     |
| <i>subturbinatus</i> .....                                 | 42                      | <i>centrale</i> .....                              | <b>70, 134, 143</b>                                   |
| <i>Amplexus</i> .....                                      | 121, 136, 155, 163, 223 | <i>inaequicostatus</i> .....                       | 48                                                    |
| <i>coralloides</i> ? .....                                 | 243                     | <i>patelliformis</i> .....                         | 20, 21, 102, 264                                      |
| <i>fragilis</i> .....                                      | <b>121</b>              | <i>sexsulcatus</i> .....                           | 21, 102, 112                                          |
| <i>yandelli</i> .....                                      | 156                     | <i>shumardi</i> .....                              | 102                                                   |
| <i>zaphrentiformis</i> .....                               | <b>136, 160</b>         | <i>subovatus</i> .....                             | 21, 102, 264                                          |
| <i>Ampullaria</i> .....                                    | 197                     | <i>Anisopoda</i> .....                             | 46                                                    |
| <i>powelli</i> .....                                       | 180, <b>188, 197</b>    | <i>Anisorhynchus</i> .....                         | 101                                                   |
| <i>Ampullina alveata</i> .....                             | 221                     | <i>Anisothyris</i> .....                           | 101                                                   |
| <i>Amusium</i> .....                                       | 266                     | <i>Anisus</i> .....                                | 34, 106, 108                                          |
| <i>conradi</i> .....                                       | <b>266</b>              | <i>Annularia</i> .....                             | 149                                                   |
| <i>simplicum</i> .....                                     | 266                     | <i>longifolia</i> .....                            | 149                                                   |
| <i>Amussium</i> .....                                      | 35                      | <i>Annulata</i> .....                              | 35                                                    |
| <i>aurarium</i> .....                                      | <b>35</b>               | <i>Anodonta</i> .....                              | 140, 160, 272                                         |
| <i>propatulum</i> .....                                    | 49                      | ? <i>angustata</i> .....                           | 167                                                   |
| <i>Anadara</i> ? <i>canalis</i> .....                      | 50                      | ? <i>cattskillensis</i> .....                      | 167                                                   |
| ? <i>congesta</i> .....                                    | 50                      | <i>corpulentoides</i> .....                        | 272                                                   |
| <i>incile</i> .....                                        | 50                      | <i>decurtata</i> .....                             | 170                                                   |
| <i>microdonta</i> .....                                    | 50                      | <i>grandoides</i> .....                            | 272                                                   |
| <i>protracta</i> .....                                     | 50                      | <i>parallela</i> .....                             | <b>140, 160, 168</b>                                  |
| <i>trigintinaria</i> .....                                 | 50                      | <i>propatoris</i> .....                            | <b>139, 160, 168</b>                                  |
| <i>trilineata</i> .....                                    | 50                      | <i>Anodontopsis</i> .....                          | 79, 194                                               |
| <i>Anarthrocanna australis</i> .....                       | <b>227</b>              | <i>amygdaleformis</i> .....                        | <b>194</b>                                            |

|                                | Page.                                                          |                         | Page.                                              |
|--------------------------------|----------------------------------------------------------------|-------------------------|----------------------------------------------------|
| Anodontopsis ? milleri         | 66, 79                                                         | Arca congesta           | 50, 215, 216                                       |
| (Modiolopsis ?) unionoides     | 79                                                             | (Cucullæa) cordata      | 15                                                 |
| unionoides                     | 66                                                             | equilateralis           | 17                                                 |
| Anolax gigantea                | 222                                                            | inornata                | 18, 180                                            |
| plicata                        | 222                                                            | shumardi                | 15                                                 |
| Anomalocardia trigintinaria    | 50                                                             | cuneus                  | 209                                                |
| Anomalocrinus                  | 37, 55, 77                                                     | declivis                | 207                                                |
| incurvus                       | 77                                                             | devincta                | 206                                                |
| Anomalocystites                | 77                                                             | equilateralis           | 92                                                 |
| (Ateleocystites) balan-        |                                                                | fabiformis              | 208                                                |
| oides                          | 69, 77                                                         | incile                  | 50                                                 |
| Anomia                         | 93, 95, 97, 158, 160, 211, 213, 219, 266                       | indurata                | 207                                                |
| argentaria                     | 266                                                            | longa                   | 209                                                |
| concentrica                    | 22, 95                                                         | microdonta              | 50, 211, 213                                       |
| gryphorhynchus                 | 71, 160, 168                                                   | obispoana               | 217                                                |
| micronema                      | 88, 160, 168                                                   | orientalis              | 207                                                |
| nitida                         | 93                                                             | parallela               | 70                                                 |
| ? obliqua                      | 21, 97                                                         | protracta               | 50                                                 |
| (Placunopsis ?) gryphorhynchus | 77                                                             | quindecemradiata        | 270                                                |
| propatoris                     | 158, 167                                                       | rumboidella             | 220                                                |
| ratiformis                     | 111                                                            | shumardi                | 274                                                |
| subcostata                     | 211, 213, 219                                                  | striata                 | 51                                                 |
| subtrigonalis                  | 21, 97                                                         | subelongata             | 218                                                |
| tellinoides                    | 266                                                            | subrotundata            | 207                                                |
| anomiidæ                       | 97, 111, 266                                                   | sulcatina               | 256                                                |
| Anomocare                      | 190                                                            | syriaca                 | 207                                                |
| ? parvum                       | 190                                                            | trilineata              | 50, 215, 216                                       |
| Anomalocardia rhomboidella     | 220                                                            | vancouverensis          | 17                                                 |
| Anomphalus                     | 40, 87                                                         | Arcadæ                  | 28                                                 |
| rotulus                        | 40, 87                                                         | Arcestes                | 110, 146, 163, 239                                 |
| Anthophyllum cuneiforme        | 220                                                            | ? — ?                   | 146, 163                                           |
| expansum                       | 247                                                            | ? cirratus              | 146, 163, 239                                      |
| Anthracerpes                   | 37, 46, 53                                                     | gabbi                   | 110, 239                                           |
| typus                          | 37, 46                                                         | ? perplanus             | 110, 239                                           |
| Anthracoptera                  | 61, 165                                                        | Arcestdæ                | 110, 239                                           |
| ?? fragilis                    | 41, 61                                                         | Archæocaris             | 90                                                 |
| polita                         | 165                                                            | vermiformis             | 89                                                 |
| Anthracopupa ohioensis         | 167                                                            | Archæocidaridæ          | 43                                                 |
| Anthrapalæmon                  | 37, 46, 61, 179                                                | Archæocidaris           | 23, 44, 72, 127, 131, 136, 150, 151, 163, 196, 245 |
| gracilis                       | 37, 46, 61, 179                                                | — ?                     | 19, 87                                             |
| Aphrodina                      | 100, 269                                                       | cratis                  | 136, 163                                           |
| tippiana                       | 269                                                            | dinimii                 | 150, 163                                           |
| Aploceras                      | 27                                                             | gracilis                | 245                                                |
| Aporrhaidæ                     | 102, 111, 134, 264                                             | longispinus             | 245                                                |
| Aporrhais                      | 102, 264                                                       | mucronata               | 23, 44                                             |
| biangulata                     | 102                                                            | ornatus                 | 131, 245                                           |
| decemlirata                    | 248                                                            | triplex                 | 151                                                |
| (Goniocheila) castorensis      | 261, 264                                                       | triserrata              | 72                                                 |
| meeki                          | 261, 264                                                       | trudifer                | 127, 131                                           |
| newberryi                      | 264                                                            | Archæocaris vermiformis | 68                                                 |
| parva                          | 21, 48                                                         | Archimedes              | 147, 154, 248                                      |
| sublevis                       | 21, 48                                                         | laxa                    | 154                                                |
| Aptycha                        | 29                                                             | Archimediopora          | 94                                                 |
| Arachnida                      | 61                                                             | — ?                     | 94                                                 |
| Arachnophyllum                 | 223                                                            | archimedes              | 255                                                |
| Arca                           | 92, 137, 207, 208, 209, 211, 213, 215, 216, 217, 218, 267, 270 | Architectonica abotti   | 48                                                 |
| — ?                            | 206, 274                                                       | henrici                 | 221                                                |
| aeclivis                       | 207                                                            | ornata                  | 221                                                |
| altirostris                    | 267                                                            | plana                   | 221                                                |
| bhamdunensis                   | 209                                                            | pseudogranulata         | 221                                                |
| brevifrons                     | 207                                                            | Arcidæ                  | 33, 98, 111, 134, 262, 263, 267, 270               |
| canalis                        | 50, 215, 216                                                   | Arcinæ                  | 33                                                 |
| carbonaria                     | 20                                                             | Arcopagella             | 70, 100                                            |
| ? coalvillensis                | 137                                                            | ? macrodonta            | 100                                                |



|                                                 | Page.                                                                                                                |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <i>Arcopagella mactroides</i> .....             | <b>70</b> , 100                                                                                                      |
| <i>Arcopagia</i> .....                          | 215, 216, 217, 218                                                                                                   |
| <i>medialis</i> .....                           | <b>215</b> , 216                                                                                                     |
| <i>texana</i> .....                             | 218                                                                                                                  |
| <i>unda</i> .....                               | <b>217</b>                                                                                                           |
| <i>Arenicolites</i> ? .....                     | 261                                                                                                                  |
| <i>Arethusiama</i> .....                        | 190                                                                                                                  |
| <i>americana</i> .....                          | <b>190</b>                                                                                                           |
| <i>Arionellus</i> .....                         | 28, 186, 259                                                                                                         |
| ( <i>Crepicephalus</i> ) <i>oweni</i> .....     | <b>28</b>                                                                                                            |
| <i>pustulatus</i> .....                         | <b>186</b>                                                                                                           |
| <i>tripunctatus</i> .....                       | <b>259</b>                                                                                                           |
| <i>Arrhoges</i> .....                           | 102                                                                                                                  |
| <i>Articulata</i> .....                         | 31, 35, 46, 55, 56, 58, 59, 74, 79, 80, 81,<br>84, 91, 105, 108, 109, 135, 136,<br>138, 144, 153, 159, 165, 260, 261 |
| <i>Asaphiscus</i> .....                         | 129                                                                                                                  |
| <i>wheeleri</i> .....                           | 129                                                                                                                  |
| <i>Asaphus</i> .....                            | 79, 91, 185, 186, 191, 248                                                                                           |
| <i>barrandi</i> .....                           | <b>232</b>                                                                                                           |
| <i>caribouensis</i> .....                       | <b>191</b>                                                                                                           |
| <i>?curiosa</i> .....                           | 191                                                                                                                  |
| <i>emoryi</i> .....                             | <b>233</b>                                                                                                           |
| <i>homalonotoides</i> .....                     | <b>186</b>                                                                                                           |
| ( <i>Isotelus</i> ) <i>iowensis</i> .....       | 250                                                                                                                  |
| <i>megistos</i> .....                           | 79                                                                                                                   |
| <i>vigilans</i> .....                           | <b>65</b> , 91                                                                                                       |
| ( <i>Megalaspis</i> ?) <i>goniocercus</i> ..... | <b>76</b>                                                                                                            |
| <i>romingeri</i> .....                          | <b>185</b>                                                                                                           |
| <i>wisconsensis</i> .....                       | <b>185</b>                                                                                                           |
| <i>Asiphonida</i> .....                         | 266                                                                                                                  |
| <i>Astarte</i> .....                            | 30, 34, 164, 207, 208, 209, 218, 236, 262,<br>263, 266, 271                                                          |
| <i>arctata</i> .....                            | <b>207</b>                                                                                                           |
| <i>arenosa</i> .....                            | <b>236</b>                                                                                                           |
| <i>castanella</i> .....                         | <b>271</b>                                                                                                           |
| <i>engonata</i> .....                           | <b>207</b>                                                                                                           |
| <i>evansi</i> .....                             | 263                                                                                                                  |
| <i>?fragilis</i> .....                          | <b>22</b> , 34, 262                                                                                                  |
| <i>gemma</i> .....                              | <b>224</b> , 225                                                                                                     |
| <i>gibbosa</i> .....                            | 51                                                                                                                   |
| <i>gregaria</i> .....                           | 15                                                                                                                   |
| <i>inornata</i> .....                           | <b>22</b> , 34                                                                                                       |
| <i>lintea</i> .....                             | <b>208</b>                                                                                                           |
| <i>lucinoides</i> .....                         | <b>209</b>                                                                                                           |
| <i>minutissima</i> .....                        | 220                                                                                                                  |
| <i>mortonensis</i> .....                        | 51                                                                                                                   |
| <i>mucronata</i> .....                          | <b>208</b>                                                                                                           |
| <i>nebrascensis</i> .....                       | 51                                                                                                                   |
| <i>orientalis</i> .....                         | <b>207</b>                                                                                                           |
| <i>packardi</i> .....                           | <b>164</b> , 180                                                                                                     |
| <i>parva</i> .....                              | 220                                                                                                                  |
| <i>pervetus</i> .....                           | <b>207</b>                                                                                                           |
| <i>planimarginata</i> .....                     | <b>271</b>                                                                                                           |
| <i>subcordata</i> .....                         | <b>209</b>                                                                                                           |
| <i>sublincolata</i> .....                       | <b>208</b>                                                                                                           |
| <i>syriaca</i> .....                            | <b>207</b>                                                                                                           |
| <i>texana</i> .....                             | <b>218</b>                                                                                                           |
| <i>undulosa</i> .....                           | <b>208</b>                                                                                                           |
| <i>vallisnerianus</i> .....                     | 51                                                                                                                   |
| <i>ventricosa</i> .....                         | <b>30</b>                                                                                                            |
| <i>veta</i> .....                               | 266                                                                                                                  |
| <i>washitensis</i> .....                        | <b>255</b>                                                                                                           |
| <i>Astartella</i> .....                         | 90, 144, 165                                                                                                         |
| — ? .....                                       | 90                                                                                                                   |

|                                 | Page.                                                                 |
|---------------------------------|-----------------------------------------------------------------------|
| <i>Astartella gurleyi</i> ..... | <b>144</b> , 165                                                      |
| <i>newberryi</i> .....          | <b>90</b>                                                             |
| <i>varica</i> .....             | 90                                                                    |
| <i>astartidae</i> .....         | 266, 268, 270, 271                                                    |
| <i>Astartella</i> .....         | <b>224</b> , 225                                                      |
| <i>?corpulenta</i> .....        | <b>225</b>                                                            |
| <i>cyclas</i> .....             | <b>224</b> , 225                                                      |
| <i>cyprina</i> .....            | <b>224</b> , 225                                                      |
| <i>cytherea</i> .....           | <b>224</b> , 225                                                      |
| <i>intrepida</i> .....          | <b>224</b> , 225                                                      |
| <i>polita</i> .....             | <b>224</b> , 225                                                      |
| <i>transversa</i> .....         | <b>224</b> , 225                                                      |
| <i>Astereidea</i> .....         | 26                                                                    |
| <i>Asterias</i> .....           | 260, 261                                                              |
| <i>dubium</i> .....             | <b>260</b> , 261                                                      |
| <i>Asteridae</i> .....          | 261                                                                   |
| <i>Asteroidea</i> .....         | 40, 44, 60, 61, 78, 260, 261                                          |
| <i>Astrospongia</i> .....       | 58                                                                    |
| <i>hamiltonensis</i> .....      | <b>41</b> , 58                                                        |
| <i>Astrea fungiformis</i> ..... | 247                                                                   |
| <i>?gigas</i> .....             | <b>247</b>                                                            |
| <i>mamillaris</i> .....         | <b>247</b>                                                            |
| <i>Astrodapsis</i> .....        | <b>215</b> , 217                                                      |
| <i>antiselli</i> .....          | <b>216</b> , 217                                                      |
| <i>Astylospongia</i> .....      | 56, 192                                                               |
| <i>?carbonaria</i> .....        | <b>41</b>                                                             |
| <i>??christiani</i> .....       | <b>56</b>                                                             |
| <i>præmorsa</i> .....           | 91                                                                    |
| <i>Athyris</i> .....            | 24, 43, 72, 85, 89, 92, 94, 109, 148, 178, 193,<br>196, 235, 245, 273 |
| <i>angelica</i> .....           | 193                                                                   |
| <i>claytoni</i> .....           | <b>235</b>                                                            |
| <i>crassicaudalis</i> .....     | <b>116</b>                                                            |
| <i>hirsuta</i> .....            | 196                                                                   |
| <i>lamellosa</i> .....          | 89                                                                    |
| <i>parvirostra</i> .....        | <b>24</b>                                                             |
| <i>persinuata</i> .....         | <b>109</b>                                                            |
| <i>planosulcata</i> .....       | 43, <b>235</b>                                                        |
| <i>roissyi</i> .....            | 109                                                                   |
| <i>subquadrata</i> ? .....      | 235                                                                   |
| <i>subtilita</i> .....          | 52, 72, 85, 92, 94, 109, 178, 245, 246                                |
| <i>vittata</i> .....            | 148                                                                   |
| <i>Atlantida</i> .....          | 121                                                                   |
| <i>Atrypa</i> .....             | 58, 62, 94, 108, 148, 193, 247, 248                                   |
| — ? .....                       | 274                                                                   |
| <i>aspera</i> .....             | 58, 62, 94                                                            |
| <i>comis</i> .....              | <b>250</b>                                                            |
| <i>desquamata</i> .....         | 193                                                                   |
| <i>limitaris</i> ? .....        | 247                                                                   |
| <i>lingulata</i> .....          | <b>273</b>                                                            |
| <i>orbicularis</i> .....        | 248                                                                   |
| <i>prisca</i> .....             | 247                                                                   |
| <i>reticularis</i> .....        | 58, 62, 94, 108, 148, 193                                             |
| <i>Aturia angustatus</i> .....  | 50                                                                    |
| <i>orbiculata</i> .....         | 49                                                                    |
| <i>vanuxemi</i> .....           | 222                                                                   |
| <i>Aucella</i> .....            | 35, 176                                                               |
| <i>concentrica</i> var. ....    | 176                                                                   |
| <i>erringtoni</i> .....         | 35                                                                    |
| var. <i>linguiformis</i> .....  | 35                                                                    |
| <i>hausmanni</i> .....          | 51, 52                                                                |
| <i>Aulacomya</i> .....          | 98                                                                    |
| <i>Aulophyllum</i> .....        | 62                                                                    |
| <i>?richardsoni</i> .....       | <b>62</b>                                                             |
| <i>Aulopora serpens</i> .....   | 192, 247                                                              |



|                                      | Page.                                                                                                    |                                       | Page.                       |
|--------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------|-----------------------------|
| <i>Aulopora tubæformis</i> .....     | 248                                                                                                      | <i>Aviculopecten idahoensis</i> ..... | 146, 162                    |
| <i>Aulosteges</i> .....              | 121                                                                                                      | <i>indianensis</i> .....              | 41, 61                      |
| <i>guadalupensis</i> .....           | 256                                                                                                      | <i>interlineatus</i> .....            | 24, 45, 132, 178            |
| <i>spondyliiformis</i> .....         | 120, 121                                                                                                 | <i>koninekii</i> .....                | 24, 45                      |
| <i>Auriculidæ</i> .....              | 112                                                                                                      | <i>limaformis</i> .....               | 116                         |
| <i>Austrella rigida</i> .....        | 227                                                                                                      | <i>macoyi</i> .....                   | 32, 132                     |
| <i>Avalana subglobosa</i> .....      | 14, 29, 102                                                                                              | <i>neglectus</i> .....                | 73, 86, 87                  |
| <i>Avicula</i> .....                 | 24, 73, 86, 136, 208, 262                                                                                | <i>nodocostatus</i> .....             | 116                         |
| — ? .....                            | 224, 274                                                                                                 | <i>oblongus</i> .....                 | 43                          |
| <i>abrupta</i> .....                 | 47                                                                                                       | <i>occidaneus</i> .....               | 110                         |
| <i>annosa</i> .....                  | 271                                                                                                      | <i>occidentalis</i> .....             | 45, 73, 132, 178            |
| <i>convexo-plano</i> .....           | 47                                                                                                       | <i>oweni</i> .....                    | 24, 43                      |
| <i>cretacea</i> .....                | 47                                                                                                       | <i>paralis</i> .....                  | 80                          |
| <i>curta</i> .....                   | 49                                                                                                       | <i>parvulus</i> .....                 | 236                         |
| ? <i>custa</i> .....                 | 232                                                                                                      | <i>pealei</i> .....                   | 146                         |
| ? <i>fibrosa</i> .....               | 15                                                                                                       | ? <i>pealei</i> .....                 | 162                         |
| <i>haydeni</i> .....                 | 13, 47                                                                                                   | <i>pellucidus</i> .....               | 24, 45                      |
| <i>iridescens</i> .....              | 47                                                                                                       | <i>peroccidens</i> .....              | 196                         |
| <i>laripes</i> .....                 | 47                                                                                                       | <i>pintoensis</i> .....               | 196                         |
| <i>linguiformis</i> .....            | 47                                                                                                       | <i>(Pseudomonotis) idahoensis</i> ..  | 71                          |
| <i>longa</i> .....                   | 73, 86                                                                                                   | <i>randolphensis</i> .....            | 41                          |
| <i>(Monotis) tenuicostata</i> .....  | 18                                                                                                       | <i>sanduskyensis</i> .....            | 67                          |
| <i>morganensis</i> .....             | 86                                                                                                       | <i>spinuliferus</i> .....             | 64                          |
| <i>multangula</i> .....              | 50                                                                                                       | <i>(Streblopteria?) hertzeri</i> ..   | 66, 90                      |
| <i>munsteri</i> .....                | 49                                                                                                       | <i>superstrictus</i> .....            | 164                         |
| <i>nebrascana</i> .....              | 47, 255                                                                                                  | <i>utahensis</i> .....                | 94, 110                     |
| <i>oblonga</i> .....                 | 24                                                                                                       | <i>weberensis</i> .....               | 235                         |
| <i>(Oxytoma) gastroides</i> .....    | 76                                                                                                       | <i>whitei</i> .....                   | 73                          |
| <i>mucronata</i> .....               | 262                                                                                                      | <i>williamsi</i> .....                | 68                          |
| <i>parkensis</i> .....               | 136                                                                                                      | <i>winchelli</i> .....                | 89                          |
| <i>pedernalis</i> .....              | 47                                                                                                       | <i>Aviculo-pectininae</i> .....       | 32                          |
| <i>petrosa</i> .....                 | 47                                                                                                       | <i>Aviculopinna</i> .....             | 73                          |
| <i>pinnaeformis</i> .....            | 51                                                                                                       | <i>americana</i> .....                | 52, 73, 90                  |
| <i>planisulca</i> .....              | 47                                                                                                       | <i>pinnaeformis</i> .....             | 52                          |
| <i>(Pseudoptera) propleura</i> ..... | 76                                                                                                       | <i>Axinæa</i> .....                   | 98, 102, 111, 160, 215, 216 |
| <i>rhytophora</i> .....              | 76                                                                                                       | <i>barbarensis</i> .....              | 215, 216, 217               |
| <i>samariensis</i> .....             | 208                                                                                                      | <i>subimbricata</i> .....             | 98                          |
| <i>speluncaria</i> .....             | 51                                                                                                       | <i>wyomingensis</i> .....             | 111                         |
| <i>subgibbosa</i> .....              | 21, 47                                                                                                   | <i>Axinea</i> .....                   | 217, 267, 271               |
| ? <i>sulcata</i> .....               | 73                                                                                                       | <i>alta</i> .....                     | 267                         |
| <i>triangularis</i> .....            | 47                                                                                                       | <i>conradi</i> .....                  | 271                         |
| <i>volgensis?</i> .....              | 226                                                                                                      | <i>holmesiana</i> .....               | 160                         |
| <i>Aviculidæ</i> .....               | 29, 32, 262, 263, 267                                                                                    | <i>mortoni</i> .....                  | 267                         |
| <i>Aviculinae</i> .....              | 29, 32                                                                                                   | <i>Axininae</i> .....                 | 34                          |
| <i>Aviculopecten</i> .....           | 24, 22, 43, 45, 61, 73, 80, 89, 90, 94,<br>110, 116, 119, 127, 132, 146,<br>162, 164, 178, 196, 235, 236 | <i>Axinus</i> .....                   | 258                         |
| — ? .....                            | 32                                                                                                       | <i>rotundatus</i> .....               | 20                          |
| <i>affinis</i> .....                 | 196                                                                                                      | <i>(Schizodus) ovatus</i> .....       | 19, 20                      |
| <i>altus</i> .....                   | 146, 162                                                                                                 | <i>securis</i> .....                  | 258                         |
| <i>amplus</i> .....                  | 24, 32, 43                                                                                               | <i>Axophyllum</i> .....               | 92, 121, 177                |
| <i>burlingtonensis</i> .....         | 24, 43                                                                                                   | <i>rudis</i> .....                    | 92, 121, 177                |
| <i>carbonarius</i> .....             | 87                                                                                                       | <i>Azthemis</i> .....                 | 217                         |
| <i>carboniferus</i> .....            | 73, 178                                                                                                  |                                       |                             |
| <i>catactus</i> .....                | 110                                                                                                      |                                       |                             |
| <i>coreyana</i> .....                | 127, 132                                                                                                 |                                       |                             |
| <i>coxanus</i> .....                 | 24, 45, 73                                                                                               |                                       |                             |
| <i>crenistriatus</i> .....           | 66, 89                                                                                                   |                                       |                             |
| <i>euro-cardinalis</i> .....         | 236                                                                                                      |                                       |                             |
| <i>(Eumicrotis?) augustensis</i> ..  | 236                                                                                                      |                                       |                             |
| <i>eurekensis</i> .....              | 196                                                                                                      |                                       |                             |
| <i>fimbriatus</i> .....              | 41                                                                                                       |                                       |                             |
| <i>grandocostus</i> .....            | 119                                                                                                      |                                       |                             |
| <i>haguei</i> .....                  | 196                                                                                                      |                                       |                             |
| <i>hawni</i> .....                   | 51                                                                                                       |                                       |                             |

## B.

|                                         |                           |
|-----------------------------------------|---------------------------|
| <i>Baculites</i> .....                  | 28, 93, 94, 103, 135, 209 |
| — ? .....                               | 209                       |
| <i>anceps</i> var. <i>obtusus</i> ..... | 94, 103                   |
| <i>asper</i> .....                      | 103                       |
| <i>baculus</i> .....                    | 28                        |
| <i>chicoensis</i> .....                 | 93                        |
| <i>compressus</i> .....                 | 14, 103                   |
| <i>grandis</i> .....                    | 14, 103                   |
| <i>inornatus</i> .....                  | 27                        |
| <i>occidentalis</i> .....               | 27, 93                    |
| <i>ovatus</i> .....                     | 14, 17, 103, 135          |
| <i>syriacus</i> .....                   | 209                       |

|                                          | Page.                        |
|------------------------------------------|------------------------------|
| Baculitidæ .....                         | 103, 135                     |
| Bailiella .....                          | <b>198</b>                   |
| Bairdia ? — .....                        | 257                          |
| Bakevella .....                          | 32, 132                      |
| parva .....                              | <b>19</b> , 20, 32, 132      |
| Balanus .....                            | 227                          |
| estrellanus .....                        | <b>217</b>                   |
| Barbatia .....                           | 98, 143, 158                 |
| barbulata .....                          | <b>158</b>                   |
| coalvillensis .....                      | 143                          |
| (Polynema ?) parallela .....             | 98                           |
| Bariosta .....                           | 105                          |
| Baroda subelliptica .....                | <b>143</b>                   |
| wyomingensis .....                       | 143                          |
| Barrandia .....                          | 191                          |
| ? — ? .....                              | 191                          |
| mccoyi .....                             | <b>191</b>                   |
| Barycrinus .....                         | <b>54</b> , 83, 84           |
| geometricus .....                        | 83                           |
| hoveyi .....                             | 83                           |
| var. herculeus .....                     | 54, 83                       |
| magnificus .....                         | <b>54</b> , 83               |
| mammatus .....                           | 83                           |
| pentagonus .....                         | 83                           |
| spectabilis .....                        | <b>64</b> , 84               |
| subtumidus .....                         | 83                           |
| Baraphyllum .....                        | 57, 144                      |
| ?? arenarium .....                       | 58                           |
| fungulus .....                           | <b>144</b>                   |
| Basommatophora .....                     | 135                          |
| Bathyomphalus .....                      | 34, 106, 137, 161            |
| Bathyurellus (Asaphiscus) bradleyi ..... | <b>76</b>                    |
| Bathyurus .....                          | 185, 191, 234                |
| armatus .....                            | 186                          |
| ? congeneris .....                       | <b>191</b>                   |
| ? haydeni .....                          | <b>76</b>                    |
| longispinus .....                        | <b>185</b>                   |
| pogonipensis .....                       | <b>234</b>                   |
| serratus .....                           | <b>76</b>                    |
| ? similinus .....                        | <b>191</b>                   |
| ? tuberculatus .....                     | <b>191</b>                   |
| Batocrinus .....                         | 42, 54, 81                   |
| cassedayanus .....                       | <b>54</b> , 81               |
| christyi .....                           | 81                           |
| (Eretmocrinus) neglectus .....           | <b>54</b> , 81               |
| remibrachiatus .....                     | 81                           |
| pyriformis .....                         | 81, 87                       |
| quasilus .....                           | <b>54</b> , 81               |
| trochiscus .....                         | <b>54</b> , 81               |
| verneuillanus .....                      | 82                           |
| Beaumontia .....                         | 147, 158                     |
| ? solitaria .....                        | <b>147</b> , 158             |
| Belemnitella .....                       | 105                          |
| ? bulbosa .....                          | <b>15</b> , 105              |
| paxillosa .....                          | 49                           |
| Belemnites .....                         | 31, 35, 95, 111, 176, 263    |
| densus .....                             | <b>19</b> , 35, 95, 179, 263 |
| macritatis .....                         | <b>176</b>                   |
| nevadensis .....                         | <b>111</b>                   |
| pacificus .....                          | 35                           |
| paxillosa .....                          | 49                           |
| Belemnitidæ .....                        | 31, 35, 105, 111, 263        |
| Belemnocrinus .....                      | 59, <b>118</b> , 120         |
| typus .....                              | <b>118</b>                   |
| whitii .....                             | <b>40</b> , 59               |

|                                         | Page.                                       |
|-----------------------------------------|---------------------------------------------|
| Bellerophon .....                       | 24, 42, 46, 55, 74, 81, 117, 118, 126, 129, |
| 132, 138, 147, 151, 154, 164, 178,      |                                             |
| 195, 197, 235, 245, 247, 248, 258       |                                             |
| allegoricus .....                       | <b>126</b> , 129                            |
| bilabiatu8 .....                        | <b>117</b>                                  |
| bilobatus .....                         | 248                                         |
| bowmani .....                           | <b>138</b>                                  |
| (Bucania) platystoma .....              | <b>55</b>                                   |
| carbonarius .....                       | 74, 178                                     |
| combsi .....                            | <b>195</b>                                  |
| crassus .....                           | <b>24</b> , 46, 132, 178                    |
| cyrtolites .....                        | 42                                          |
| gibsoni .....                           | <b>154</b>                                  |
| inspeciosus .....                       | <b>151</b>                                  |
| interlineatus .....                     | 51                                          |
| leda .....                              | 195                                         |
| lyra .....                              | 195                                         |
| mæra .....                              | 195                                         |
| majusculus .....                        | <b>197</b>                                  |
| marcouanus .....                        | 51                                          |
| marcouianus .....                       | 74                                          |
| micromphalus .....                      | 226                                         |
| montfortianus .....                     | 74                                          |
| neleus .....                            | <b>235</b>                                  |
| newberryi .....                         | <b>67</b> , 81                              |
| nodocarinatus .....                     | 178                                         |
| panneus .....                           | <b>118</b>                                  |
| patulus .....                           | 81                                          |
| pelops .....                            | 195                                         |
| percarinatus .....                      | 74, 178                                     |
| perelegans .....                        | <b>117</b>                                  |
| perplexa .....                          | <b>195</b>                                  |
| propinquus .....                        | <b>67</b> , 81                              |
| scriptiferus .....                      | <b>118</b>                                  |
| strictus .....                          | <b>223</b> , 226                            |
| sublævis .....                          | 154                                         |
| subpapillosus .....                     | 147, 164                                    |
| textilis .....                          | 197                                         |
| undulatus .....                         | <b>223</b> , 226                            |
| vinculatus .....                        | <b>117</b>                                  |
| Bellerophonitidæ .....                  | 39, 132                                     |
| Bellinurus .....                        | 36, 46                                      |
| danæ .....                              | <b>36</b> , 46                              |
| Beyrichia .....                         | 121, 188, 191, 195                          |
| bella .....                             | <b>188</b>                                  |
| cincinnatiensis .....                   | 187                                         |
| fætoidea .....                          | <b>121</b>                                  |
| lithofactor .....                       | <b>120</b>                                  |
| var. velata .....                       | 120                                         |
| petrifactor .....                       | <b>121</b>                                  |
| var. velata .....                       | 121                                         |
| (Primitia) occidentalis .....           | <b>195</b>                                  |
| Blastoidea .....                        | 26, 44, 126                                 |
| Brachiopoda .....                       | 20, 22, 24, 26, 27, 30, 31,                 |
| 33, 41, 43, 44, 45, 55, 56, 57, 58, 59, |                                             |
| 60, 61, 62, 64, 68, 72, 78, 80, 85, 89, |                                             |
| 90, 91, 92, 94, 96, 98, 108, 109, 110,  |                                             |
| 116, 118, 121, 126, 127, 129, 130, 131, |                                             |
| 133, 138, 146, 147, 148, 149, 151, 154, |                                             |
| 155, 162, 163, 165, 177, 189, 190, 192, |                                             |
| 196, 225, 232, 233, 234, 235, 236, 250, |                                             |
| 253, 255, 257, 260, 261, 262, 265, 274  |                                             |
| Brachydontes .....                      | 140, 158, 160                               |
| Brachyspira .....                       | 159                                         |
| Breviarca .....                         | 98, 267                                     |

|                                           | Page.                       |
|-------------------------------------------|-----------------------------|
| <i>Breviarca saffordi</i> .....           | 267                         |
| <i>Bryozoa</i> .....                      | 19, 154, 253, 255, 257, 274 |
| <i>Bucanella nana</i> .....               | <b>66</b>                   |
| <i>Bucardinae</i> .....                   | 34                          |
| <i>Buccinidae</i> .....                   | 103                         |
| <i>Buccinofusus diegoensis</i> .....      | 222                         |
| <i>Buccinopsis</i> .....                  | 219                         |
| <i>parryi</i> .....                       | <b>219</b>                  |
| <i>Buccinum</i> .....                     | 205                         |
| ? <i>devinctum</i> .....                  | <b>206</b>                  |
| <i>integrum</i> .....                     | <b>205</b>                  |
| ? <i>nebrascensis</i> .....               | <b>14</b>                   |
| <i>sowerbii</i> .....                     | 221                         |
| ? <i>vinculum</i> .....                   | <b>13</b>                   |
| <i>Buchiceras</i> .....                   | 135                         |
| <i>swalovi</i> .....                      | 135                         |
| <i>Bulinnea</i> .....                     | 106                         |
| <i>Bulinus linnaeformis</i> .....         | <b>16</b> , 221             |
| <i>nebrascensis</i> .....                 | <b>16</b>                   |
| <i>perversus</i> .....                    | 221                         |
| ? <i>teres</i> .....                      | <b>15</b> , 221             |
| ? <i>vermiculus</i> .....                 | <b>15</b> , 221             |
| <i>Bulinus</i> .....                      | 106, 161                    |
| <i>atavus</i> .....                       | <b>139</b> , 161, 169       |
| <i>disjunctus</i> .....                   | <b>145</b> , 161, 169       |
| <i>floridanus</i> .....                   | 170                         |
| <i>longiusculus</i> .....                 | 106, 161, 169               |
| <i>rhomboidens</i> .....                  | 106, 161, 169               |
| <i>subelongatus</i> .....                 | 106, 161, 169               |
| <i>Bulla</i> .....                        | 212, 214                    |
| <i>dekayi</i> .....                       | 220                         |
| <i>jugularis</i> .....                    | <b>212</b> , 214            |
| <i>minor</i> .....                        | <b>14</b>                   |
| <i>occidentalis</i> .....                 | <b>14</b>                   |
| <i>petrosa</i> .....                      | 50, <b>206</b>              |
| <i>subcylindrica</i> .....                | <b>16</b>                   |
| <i>volvaria</i> .....                     | <b>14</b>                   |
| <i>Bullidae</i> .....                     | 101, 264                    |
| <i>Bursacrinus</i> .....                  | <b>26</b> , 59, 118         |
| <i>confirmatus</i> .....                  | <b>118</b>                  |
| <i>wachsmuthi</i> .....                   | <b>26</b> , 59              |
| <i>Busycon</i> ?.....                     | 211, 213                    |
| <i>bairdi</i> .....                       | 16                          |
| ? <i>blakei</i> .....                     | <b>211</b> , 213            |
| ? <i>oregonensis</i> .....                | 50                          |
| <i>Buthus</i> ?? <i>carbonarius</i> ..... | <b>53</b>                   |
| <i>Bythinella</i> .....                   | 159                         |
| <i>gregaria</i> .....                     | <b>70</b> , 159, 170        |
| C.                                        |                             |
| <i>Cælentorata</i> .....                  | 177                         |
| <i>Calceocrinus</i> .....                 | 63, 82, 83, 188             |
| <i>barrandii</i> .....                    | <b>188</b>                  |
| ? <i>bradleyi</i> .....                   | <b>63</b> , 83              |
| ? <i>wachsmuthi</i> .....                 | <b>63</b> , 82              |
| <i>Calceola</i> .....                     | 99                          |
| <i>Callianassa</i> .....                  | 153                         |
| <i>danai</i> .....                        | <b>13</b>                   |
| <i>oregonensis</i> .....                  | <b>227</b>                  |
| <i>ulrichi</i> .....                      | <b>153</b> , 157            |
| <i>Callipteris</i> .....                  | 149                         |
| <i>sullivanti</i> .....                   | 149                         |
| <i>Callista</i> .....                     | 28, 100, 269                |
| ( <i>Aphrodina</i> ?) <i>tenuis</i> ..... | 100                         |

|                                                 | Page.                               |
|-------------------------------------------------|-------------------------------------|
| <i>Callista delawarensis</i> .....              | <b>269</b>                          |
| <i>deweyi</i> .....                             | 28                                  |
| ( <i>Dosiniopsis</i> ) <i>deweyi</i> .....      | 100                                 |
| <i>nebrascensis</i> .....                       | 100                                 |
| <i>orbiculata</i> .....                         | 100                                 |
| <i>owenana</i> .....                            | 100                                 |
| <i>eufalensis</i> .....                         | 48                                  |
| ? <i>pellucida</i> .....                        | 100                                 |
| <i>Calloarca</i> .....                          | 98                                  |
| <i>Callonema</i> .....                          | 195                                 |
| <i>occidentalis</i> .....                       | <b>195</b>                          |
| <i>Calobates</i> .....                          | 101                                 |
| <i>Calophyllum</i> .....                        | <b>223</b>                          |
| <i>Calymene</i> .....                           | 79, 148                             |
| <i>bufo</i> .....                               | 247                                 |
| <i>senaria</i> .....                            | 79, 148                             |
| <i>Calymenidae</i> .....                        | 260, 261                            |
| <i>Calyptræa trochiformis</i> .....             | 221                                 |
| <i>Camæna</i> .....                             | 106                                 |
| <i>Camarophoria</i> .....                       | 43, 196, 257                        |
| ? <i>bisulcata</i> .....                        | <b>256</b> , 257                    |
| <i>cooperensis</i> .....                        | 196                                 |
| <i>globulina</i> .....                          | 52                                  |
| <i>schlothemi</i> ?.....                        | 257                                 |
| <i>subtrigonia</i> .....                        | 43                                  |
| <i>swalloviana</i> .....                        | <b>257</b>                          |
| <i>Camerinidae</i> .....                        | 31                                  |
| <i>Cameroceas</i> .....                         | 129                                 |
| <i>Campeloma</i> .....                          | 107, 112, 162, 166                  |
| <i>macrospira</i> .....                         | 112, 162, 168                       |
| ( <i>Melantho</i> ) <i>macrospira</i> .....     | <b>68</b>                           |
| <i>multilineata</i> .....                       | 107, 162, 169                       |
| <i>multilineatum</i> .....                      | 221                                 |
| <i>multistriata</i> .....                       | 107, 162, 169, 221                  |
| <i>producta</i> .....                           | <b>166</b> , 169                    |
| <i>vetula</i> .....                             | 107, 162, 169                       |
| <i>vetulum</i> .....                            | 221                                 |
| <i>Campophyllum</i> .....                       | 72, 109, 177                        |
| ? <i>texanum</i> .....                          | <b>257</b>                          |
| <i>torquium</i> .....                           | 72, 177                             |
| <i>Camptonectes</i> .....                       | 33, 49, 95, 127, 133, 164, 236, 262 |
| ( <i>Amusium</i> ) <i>burlingtonensis</i> ..... | 266                                 |
| <i>bellistriata</i> .....                       | 95                                  |
| <i>bellistriatus</i> .....                      | 33, 49, 133, 236, 262               |
| <i>calvatus</i> .....                           | 220                                 |
| <i>extenuatus</i> .....                         | 33, 49, 180, 236, 262               |
| <i>parvus</i> .....                             | <b>266</b>                          |
| <i>pertenuistriatus</i> .....                   | <b>236</b>                          |
| <i>platessa</i> .....                           | <b>127</b> , 133                    |
| <i>platessiformis</i> .....                     | 164                                 |
| <i>stygius</i> .....                            | <b>127</b> , 133                    |
| <i>Camptopteris remondi</i> .....               | <b>246</b>                          |
| <i>Campylodiscus americ</i> ?.....              | 229                                 |
| <i>Cancellaria</i> .....                        | 210                                 |
| <i>petrosa</i> .....                            | <b>210</b>                          |
| <i>Caninia</i> .....                            | 223                                 |
| <i>Cantharis vaughni</i> .....                  | 49                                  |
| <i>Cantharulus</i> .....                        | 103                                 |
| <i>Cantharus</i> .....                          | 103                                 |
| ( <i>Cantharulus</i> ) <i>vaughani</i> .....    | 103                                 |
| <i>julesburgensis</i> .....                     | <b>157</b>                          |
| <i>Canthyrina</i> .....                         | 105                                 |
| <i>Caprina</i> .....                            | 214, 218                            |
| <i>occidentalis</i> .....                       | <b>215</b> , 218                    |



|                                               | Page.                                                             |                                                | Page.                                                                                                                                                                                                                                                                            |
|-----------------------------------------------|-------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Caprina planata</i> .....                  | <b>215</b> , 218                                                  | <i>Cardium iowensis</i> .....                  | <b>218</b>                                                                                                                                                                                                                                                                       |
| <i>Caprinella coralloidea</i> .....           | <b>13</b>                                                         | <i>kansasense</i> .....                        | <b>70</b> , 99                                                                                                                                                                                                                                                                   |
| <i>Caprotina</i> .....                        | 93                                                                | <i>luteum</i> .....                            | <b>210</b> , 212                                                                                                                                                                                                                                                                 |
| ( <i>Requienia</i> ?) <i>bicornis</i> .....   | 93                                                                | <i>mediale</i> .....                           | <b>218</b>                                                                                                                                                                                                                                                                       |
| <i>texana</i> .....                           | 243                                                               | <i>modestum</i> .....                          | 50, <b>211</b> , 213                                                                                                                                                                                                                                                             |
| <i>Capsa</i> .....                            | 220                                                               | <i>multistriatum</i> .....                     | 253, <b>255</b>                                                                                                                                                                                                                                                                  |
| <i>texana</i> .....                           | <b>220</b>                                                        | <i>ovulum</i> .....                            | <b>208</b>                                                                                                                                                                                                                                                                       |
| <i>Capularia discoidea</i> .....              | 220                                                               | <i>pauperculum</i> .....                       | <b>70</b> , 143                                                                                                                                                                                                                                                                  |
| <i>Capulidae</i> .....                        | 132                                                               | <i>perenne</i> .....                           | <b>28</b>                                                                                                                                                                                                                                                                        |
| <i>Capulus fragilis</i> .....                 | <b>14</b>                                                         | ( <i>Protocardia</i> ) <i>filosum</i> .....    | <b>218</b>                                                                                                                                                                                                                                                                       |
| <i>occidentalis</i> .....                     | <b>13</b> , 48                                                    | <i>multistriatum</i> .....                     | 218                                                                                                                                                                                                                                                                              |
| <i>Carbonarea</i> .....                       | <b>64</b> , 92                                                    | <i>salinense</i> .....                         | <b>70</b>                                                                                                                                                                                                                                                                        |
| <i>gibbosa</i> .....                          | <b>64</b> , 92                                                    | <i>texanum</i> .....                           | 218                                                                                                                                                                                                                                                                              |
| <i>Cardiidae</i> .....                        | 34, 99, 111, 268, 271                                             | ( <i>Protocardium</i> ) <i>perelongatum</i> .. | <b>268</b>                                                                                                                                                                                                                                                                       |
| <i>Cardinia</i> .....                         | 164, 224                                                          | <i>rarum</i> .....                             | <b>256</b>                                                                                                                                                                                                                                                                       |
| <i>costata</i> .....                          | 225                                                               | <i>ripleyanum</i> .....                        | 268                                                                                                                                                                                                                                                                              |
| <i>cuneata</i> .....                          | <b>224</b>                                                        | <i>ripleyense</i> .....                        | 268                                                                                                                                                                                                                                                                              |
| ? <i>cuneata</i> .....                        | 225                                                               | <i>sancti-sabæ</i> .....                       | 47                                                                                                                                                                                                                                                                               |
| <i>exilis</i> .....                           | 224                                                               | <i>scitulum</i> .....                          | <b>17</b>                                                                                                                                                                                                                                                                        |
| <i>precisa</i> .....                          | <b>164</b>                                                        | <i>shumardi</i> .....                          | <b>21</b>                                                                                                                                                                                                                                                                        |
| <i>recta</i> .....                            | <b>224</b> , 225                                                  | <i>speciosum</i> .....                         | <b>16</b>                                                                                                                                                                                                                                                                        |
| <i>Cardiola</i> .....                         | 197                                                               | <i>subeurtum</i> .....                         | 111                                                                                                                                                                                                                                                                              |
| ? <i>filicostata</i> .....                    | <b>197</b>                                                        | <i>subquadratum</i> .....                      | <b>256</b>                                                                                                                                                                                                                                                                       |
| <i>Cardiomorpha</i> .....                     | 24, 79, 86, 89, 119, 236, 258                                     | <i>syriacum</i> .....                          | <b>207</b>                                                                                                                                                                                                                                                                       |
| ( <i>Cardiopsis</i> ?) <i>parvirostris</i> .. | <b>119</b>                                                        | <i>trite</i> .....                             | <b>143</b>                                                                                                                                                                                                                                                                       |
| <i>missouriensis</i> .....                    | 86, 236                                                           | <i>Caricella flemingii</i> .....               | 221                                                                                                                                                                                                                                                                              |
| ? <i>obliquata</i> .....                      | <b>68</b> , 79                                                    | <i>Carinifex</i> .....                         | 112                                                                                                                                                                                                                                                                              |
| <i>radiata</i> .....                          | <b>24</b>                                                         | <i>binneyi</i> .....                           | <b>65</b>                                                                                                                                                                                                                                                                        |
| <i>subglobosa</i> .....                       | <b>89</b>                                                         | <i>tryoni</i> var. <i>concava</i> .....        | <b>65</b>                                                                                                                                                                                                                                                                        |
| <i>Cardiopsis</i> .....                       | <b>26</b> , 42, 119                                               | ( <i>Vorticifex</i> ) <i>binneyi</i> .....     | 112, 166, 170                                                                                                                                                                                                                                                                    |
| <i>radiata</i> .....                          | 42                                                                | <i>tryoni</i> .....                            | <b>65</b> , 112, 166, 170                                                                                                                                                                                                                                                        |
| <i>Cardissoides</i> .....                     | 21                                                                | <i>Caryatis</i> .....                          | 100, 271                                                                                                                                                                                                                                                                         |
| <i>Cardita</i> .....                          | 211, 213, 216, 218, 219, 270, 271                                 | <i>ovalis</i> .....                            | <b>271</b>                                                                                                                                                                                                                                                                       |
| <i>abbreviata</i> .....                       | 50                                                                | ? <i>veta</i> .....                            | <b>271</b>                                                                                                                                                                                                                                                                       |
| <i>brittoni</i> .....                         | <b>271</b>                                                        | <i>Caryophyllia</i> .....                      | 142                                                                                                                                                                                                                                                                              |
| <i>carinata</i> .....                         | 50                                                                | <i>egeria</i> .....                            | 142                                                                                                                                                                                                                                                                              |
| <i>eminula</i> .....                          | 218                                                               | <i>johannis</i> .....                          | <b>142</b>                                                                                                                                                                                                                                                                       |
| <i>intermedia</i> .....                       | <b>270</b>                                                        | <i>Cassidula</i> .....                         | 219                                                                                                                                                                                                                                                                              |
| <i>littoralis</i> .....                       | 271                                                               | ( <i>Lacinia alveata</i> ) .....               | 219                                                                                                                                                                                                                                                                              |
| <i>monilicosta</i> .....                      | 50                                                                | <i>Cassidulus patelliformis</i> .....          | 222                                                                                                                                                                                                                                                                              |
| <i>occidentalis</i> .....                     | 50, 216                                                           | <i>Cassiope</i> .....                          | 127, 134                                                                                                                                                                                                                                                                         |
| <i>perantiqua</i> .....                       | 271                                                               | <i>whitfieldi</i> .....                        | <b>127</b> , 134                                                                                                                                                                                                                                                                 |
| <i>planicosta</i> .....                       | <b>211</b> , 213, 219                                             | <i>Cassiopella</i> .....                       | <b>139</b> , 162                                                                                                                                                                                                                                                                 |
| <i>radialis</i> .....                         | 50                                                                | <i>turricula</i> .....                         | 162, 169                                                                                                                                                                                                                                                                         |
| <i>rhombea</i> .....                          | <b>271</b>                                                        | <i>Catenipora escharoides</i> .....            | 247                                                                                                                                                                                                                                                                              |
| <i>subtenta</i> .....                         | 50, <b>206</b>                                                    | <i>gracilis</i> .....                          | <b>232</b>                                                                                                                                                                                                                                                                       |
| <i>subtetrica</i> .....                       | <b>220</b>                                                        | <i>Catillocrinus</i> .....                     | 54, 59, 83                                                                                                                                                                                                                                                                       |
| <i>Cardium</i> .....                          | 23, 93, 99, 111, 143, 207, 208, 209, 210, 211, 212, 213, 218, 268 | <i>bradleyi</i> .....                          | <b>54</b> , 83                                                                                                                                                                                                                                                                   |
| <i>australe</i> .....                         | 225                                                               | <i>wachsmuthi</i> .....                        | 59                                                                                                                                                                                                                                                                               |
| <i>bellum</i> .....                           | <b>93</b>                                                         | <i>Catillus</i> .....                          | 97                                                                                                                                                                                                                                                                               |
| <i>bellum</i> .....                           | <b>208</b>                                                        | <i>obliquus</i> .....                          | 221                                                                                                                                                                                                                                                                              |
| <i>biseriatum</i> .....                       | <b>207</b> , 210                                                  | <i>Catopygus patelleformis</i> .....           | 222                                                                                                                                                                                                                                                                              |
| ( <i>Cerastoderma</i> ) <i>modestum</i> ..... | 50                                                                | <i>Cavolinidae</i> .....                       | 31                                                                                                                                                                                                                                                                               |
| <i>choctawense</i> .....                      | 159                                                               | <i>Cellepora tubulata</i> .....                | 222                                                                                                                                                                                                                                                                              |
| <i>congestum</i> .....                        | <b>218</b>                                                        | <i>Cemoria crucibuliformis</i> .....           | 50                                                                                                                                                                                                                                                                               |
| <i>crebrichinatum</i> .....                   | <b>207</b> , 209                                                  | <i>Centrocrinus</i> .....                      | 38, 42                                                                                                                                                                                                                                                                           |
| ( <i>Criocardium</i> ) <i>dumosum</i> .....   | 268                                                               | <i>Centronella</i> .....                       | 56                                                                                                                                                                                                                                                                               |
| <i>multiradiatum</i> .....                    | 268                                                               | <i>billingsiana</i> .....                      | <b>56</b>                                                                                                                                                                                                                                                                        |
| <i>speciosum</i> .....                        | 99                                                                | <i>Cephalopoda</i> .....                       | 20, 21, 22, 25, 27, 28, 31, 33, 35, 38, 39, 40, 42, 44, 46, 55, 59, 63, 65, 67, 68, 74, 79, 80, 81, 84, 87, 91, 93, 94, 95, 103, 109, 110, 111, 117, 121, 126, 129, 132, 135, 138, 144, 146, 149, 154, 159, 162, 165, 179, 191, 195, 198, 226, 236, 250, 256, 258, 261, 262, 265 |
| <i>curtum</i> .....                           | 111                                                               | <i>Cerastoderma</i> .....                      | <b>99</b>                                                                                                                                                                                                                                                                        |
| <i>elegantulum</i> .....                      | 47                                                                |                                                |                                                                                                                                                                                                                                                                                  |
| <i>eufaulensis</i> .....                      | 268                                                               |                                                |                                                                                                                                                                                                                                                                                  |
| <i>ferox</i> .....                            | <b>225</b>                                                        |                                                |                                                                                                                                                                                                                                                                                  |
| ( <i>Hemicardium</i> ?) <i>curtum</i> .....   | <b>28</b>                                                         |                                                |                                                                                                                                                                                                                                                                                  |
| <i>hermonense</i> .....                       | <b>207</b>                                                        |                                                |                                                                                                                                                                                                                                                                                  |



|                                | Page.                       |                                             | Page.                                          |
|--------------------------------|-----------------------------|---------------------------------------------|------------------------------------------------|
| Ceratiocaris.....              | 61, 89                      | Chione (Liophora) latilirata.....           | 50                                             |
| (Colpocaris) bradleyi.....     | <b>68</b> , 89              | Chiton.....                                 | 87                                             |
| elytroides.....                | <b>68</b> , 90              | carbonarius.....                            | 87                                             |
| sinuatus.....                  | <b>53</b> , 61              | Chladocrinus.....                           | 33                                             |
| (Solenocaris) strigata.....    | <b>68</b> , 90              | Chlamys.....                                | 97                                             |
| Ceraurus.....                  | 79, 186, 191, 248           | nebrascensis.....                           | 97                                             |
| ?.....                         | 191                         | Chonetes.....                               | 24, 31, 43, 60, 62, 72, 85, 94, 119, 127, 131, |
| icarus.....                    | 79                          | 177, 192, 235, 245, 257                     |                                                |
| rarus.....                     | <b>186</b>                  | deflecta.....                               | 192                                            |
| pleurescathemus.....           | 185                         | filistriata.....                            | <b>193</b>                                     |
| Cercomya.....                  | 269                         | flemingi?.....                              | 257                                            |
| peculiaris.....                | 269                         | geniculata.....                             | <b>119</b>                                     |
| Ceriphasiidae.....             | 106, 112, 139               | glabra.....                                 | 52, 72                                         |
| Cerithidea.....                | 161, 180                    | granulifera.....                            | 72, 131, <b>250</b>                            |
| ? nebrascensis.....            | 169, 180                    | hemispherica.....                           | 192                                            |
| (Pirenella?) nebrascensis..... | 106, 161                    | illinoisensis.....                          | 60                                             |
| Cerithiidae.....               | 106                         | ? iowensis.....                             | <b>250</b>                                     |
| Cerithiopsidae.....            | 102                         | loganensis.....                             | <b>235</b>                                     |
| Cerithiopsis.....              | 102                         | macrostriata.....                           | <b>193</b>                                     |
| moreauensis.....               | 102                         | mesoloba.....                               | 131                                            |
| Cerithium.....                 | 180, 210                    | ? ? millepunctata.....                      | <b>64</b> , 85                                 |
| bilineatum.....                | <b>210</b>                  | mucronata.....                              | <b>19</b> , 20, 31, 52, 193                    |
| fremonti.....                  | 221, <b>231</b>             | permiana.....                               | <b>257</b>                                     |
| mediale.....                   | <b>206</b>                  | planumbona.....                             | <b>24</b> , 43                                 |
| nebrascensis.....              | <b>16</b>                   | platynota.....                              | <b>127</b> , 131                               |
| nodulosum.....                 | 221, <b>231</b>             | pusilla.....                                | 62                                             |
| pillingi.....                  | <b>180</b>                  | setigera.....                               | 193                                            |
| tenerum.....                   | 221, <b>231</b>             | smithii.....                                | 85, 274                                        |
| totinum-sanctorum.....         | <b>180</b>                  | variolata.....                              | 232                                            |
| Chænocardia.....               | 86                          | verneuliana.....                            | 20, 72, 177, 245                               |
| ovato.....                     | 86                          | var. utahensis.....                         | 94                                             |
| Chænomya.....                  | <b>32</b> , 38, 73, 84, 86  | Chonophyllum.....                           | 165                                            |
| cooperi.....                   | 32                          | sedaliense.....                             | <b>165</b>                                     |
| hybrida.....                   | <b>38</b>                   | Cibota.....                                 | 267                                            |
| leavenworthensis.....          | 32, 73                      | multiradiata.....                           | 267                                            |
| minchaba.....                  | 73, 86                      | obesa.....                                  | <b>267</b>                                     |
| rhomboidea.....                | <b>38</b> , 84              | rostellata.....                             | 267                                            |
| Chætetes.....                  | 55, 131, 138, 147, 158, 257 | uniopsis.....                               | 267                                            |
| ? ? dimissus.....              | <b>147</b> , 158            | Cidaris.....                                | 206                                            |
| lycoperdon.....                | 231                         | hemigranosus.....                           | 159                                            |
| mackrothii.....                | 257                         | Cinulia.....                                | 29, 101                                        |
| milleporaceus.....             | 131                         | (Avellana) pulchella.....                   | 48                                             |
| muscatinensis.....             | <b>138</b>                  | naticoides.....                             | 48                                             |
| petropolitanus.....            | 55                          | (Oligoptycha) concinna.....                 | 102                                            |
| Chamidae.....                  | 180, 268                    | Cladocora [?] lineata.....                  | 49                                             |
| Chariocephalus.....            | 190, 234                    | Cladocrinus.....                            | 33                                             |
| ? tumifrons.....               | 190, <b>234</b>             | Cladodus occidentalis.....                  | 20                                             |
| Chemnitzia.....                | 48, 103, 134, 258           | Cladopora.....                              | 155, 192                                       |
| cerithiformis.....             | 103                         | pulehra.....                                | 192                                            |
| corona.....                    | 48                          | reticulata.....                             | 155                                            |
| meekiana.....                  | 48                          | Clasteria.....                              | <b>227</b>                                     |
| swallowiana.....               | <b>258</b>                  | australis.....                              | <b>227</b>                                     |
| ? texana.....                  | 48                          | Clathropora.....                            | 155                                            |
| Chenopus.....                  | 207, 209, 210               | flabellata.....                             | <b>231</b>                                     |
| ?.....                         | 210                         | frondosa.....                               | 155                                            |
| induratus.....                 | <b>207</b>                  | Clathropteris.....                          | 246                                            |
| syriacus.....                  | <b>208</b>                  | Clausilia contraria.....                    | 221                                            |
| turriculoides.....             | <b>207</b>                  | teres.....                                  | 221                                            |
| Chetetes crinita.....          | 226                         | vermicula.....                              | 221                                            |
| gracilis.....                  | <b>226</b>                  | Clavagella.....                             | 270                                            |
| ovata.....                     | 226                         | armata.....                                 | 270                                            |
| tasmaniensis.....              | 226                         | Clavatula?.....                             | 211, 213                                       |
| Chione.....                    | 100                         | ? californica.....                          | <b>211</b> , 213                               |
| (Liophora) alveatus.....       | 50                          | Clavelites (Peistochilus) scarboroughi..... | 49                                             |
| athleta.....                   | 50                          | Clavella vicksburgensis.....                | 222                                            |

|                             | Page.           |                                                   | Page.                                    |
|-----------------------------|-----------------|---------------------------------------------------|------------------------------------------|
| Clavifusus altile.....      | 222             | Comarocystites shumardi var. obconicus .....      | 37, 54                                   |
| cooperi.....                | 222             | Combophyllum.....                                 | 62                                       |
| Cleidophorus.....           | 32              | multiradiatum.....                                | 62                                       |
| Cleobis.....                | 223, 225        | Complanaria.....                                  | 99                                       |
| gracilis.....               | 224             | Conactæon.....                                    | 29                                       |
| grandis.....                | 223             | Conchifera.....                                   | 21, 22, 116, 119, 127, 130, 132, 133,    |
| recta.....                  | 224             | 135, 136, 137, 138, 140, 142, 144, 146, 147, 151, |                                          |
| Clidophorus.....            | 79              | 153, 155, 158, 159, 160, 162, 163, 165, 178, 250  |                                          |
| (Nuculites ?) fabula.....   | 79              | Concholepas pygmæa.....                           | 221                                      |
| pallasi.....                | 51              | Conchopeltis.....                                 | 185                                      |
| (Pleurophorus) simplus..... | 51              | alternata.....                                    | 185                                      |
| solenoides.....             | 51              | minnesotensis.....                                | 185                                      |
| Climacograptus.....         | 129             | Confervites? tenella.....                         | 227                                      |
| Clinopistha.....            | 64, 80, 86, 178 | Coniferæ.....                                     | 226                                      |
| antiqua.....                | 66, 80          | Conocardium.....                                  | 38, 80, 92, 117, 130, 194                |
| radiata.....                | 178             | nevadensis.....                                   | 194                                      |
| var. levis.....             | 64, 86          | obliquum.....                                     | 38, 92                                   |
| Clisiophyllum.....          | 30, 223         | ohioense.....                                     | 66, 80                                   |
| gabbi.....                  | 30              | pulcellum.....                                    | 117                                      |
| Closteriscus.....           | 102             | trigonale.....                                    | 80                                       |
| tenuilineatus.....          | 102             | Conocephalites.....                               | 186, 234                                 |
| Clydonites.....             | 110, 239        | calciferus.....                                   | 186                                      |
| levidorsatus.....           | 110, 239        | hartii.....                                       | 186                                      |
| Clydonitidæ.....            | 110, 239        | (Pterocephalus) laticeps.....                     | 234                                      |
| Clypeaster jonesii.....     | 222             | subcoronatus.....                                 | 234                                      |
| rogersi.....                | 222             | Conocoryphe.....                                  | 108, 129, 198, 234                       |
| tumidus.....                | 222             | (Bailiella) baileyi.....                          | 198                                      |
| Cocconeis concentrica.....  | 229             | (Conocephalites) kingii.....                      | 65                                       |
| finnica.....                | 229             | elegans.....                                      | 198                                      |
| gemmata.....                | 229             | matthewi.....                                     | 108                                      |
| lineata.....                | 229             | (Ptychoparia) gallatinensis.....                  | 76                                       |
| oblonga.....                | 229             | kingii.....                                       | 108, 129                                 |
| pretexta.....               | 203, 229        | walcotti.....                                     | 198                                      |
| punctata.....               | 229             | Conodictyum.....                                  | 40                                       |
| Cocconema asperum.....      | 203, 229        | radiatum.....                                     | 40                                       |
| cistula.....                | 229             | Conomitra fusoides.....                           | 221                                      |
| cymbiforme.....             | 203             | Constellaria.....                                 | 155                                      |
| gibbum.....                 | 229             | antheloidea.....                                  | 155                                      |
| gracile.....                | 229             | Conularia.....                                    | 39, 81, 84, 89, 118, 138, 149, 151, 165, |
| lanceolata.....             | 229             | 185, 195, 198, 226                                |                                          |
| lunula.....                 | 229             | byblis.....                                       | 118                                      |
| Codonites.....              | 64, 83, 87      | crustula.....                                     | 151, 165                                 |
| gracilis.....               | 64, 83          | elegantula.....                                   | 67, 81                                   |
| stelliformis.....           | 83, 87          | inornata.....                                     | 226                                      |
| Cœlocrinus.....             | 42, 117         | levigata.....                                     | 226                                      |
| concavus.....               | 42              | micronema.....                                    | 67, 89                                   |
| subspinosus.....            | 117             | missouriensis.....                                | 84, 149, 198                             |
| Cœlopleurus infulatus.....  | 222             | molaris.....                                      | 138                                      |
| Cœlospira concava.....      | 36              | multicostata.....                                 | 39                                       |
| Coleolus.....               | 195             | newberryi.....                                    | 89                                       |
| lævis.....                  | 195             | quadrata.....                                     | 185                                      |
| Coleoprion.....             | 191             | subcarbonaria.....                                | 39, 84                                   |
| minuta.....                 | 191             | tennistriata?.....                                | 226                                      |
| Colpocaris.....             | 89              | victa.....                                        | 118                                      |
| Columna.....                | 106, 161        | whitei.....                                       | 39                                       |
| teres.....                  | 106, 161, 169   | Coralliochama.....                                | 180                                      |
| vermicula.....              | 106, 161, 169   | orcutti.....                                      | 180                                      |
| var. contraria.....         | 106             | Corbicula.....                                    | 99, 105, 112, 137, 140, 160, 166, 266    |
| Columnaria.....             | 223             | æquilateralis.....                                | 76                                       |
| ? sexradiata.....           | 49              | annosa.....                                       | 266                                      |
| thomii.....                 | 233             | augheyi.....                                      | 166, 168                                 |
| Colus.....                  | 212, 214        | berthoudi.....                                    | 166, 168                                 |
| arctatus.....               | 50, 212, 214    | cardiniæformis.....                               | 140, 160                                 |
| Comarocystites.....         | 37, 54          | cleburni.....                                     | 140, 160, 168                            |
| shumardi.....               | 37, 54          | crassatelliformis.....                            | 70                                       |

|                                                    | Page.                                             |                                             | Page                                      |
|----------------------------------------------------|---------------------------------------------------|---------------------------------------------|-------------------------------------------|
| <i>Corbicula</i> (Cyrena?) <i>securis</i> .....    | <b>76</b>                                         | <i>Corbulamella</i> .....                   | <b>18, 101</b>                            |
| <i>cytheriformis</i> .....                         | 105, 160, 169                                     | <i>gregaria</i> .....                       | 18, 101                                   |
| ? <i>emacerrata</i> .....                          | <b>266</b>                                        | <i>Corbulidae</i> .....                     | 101, 103, 111, 112, 134, 269, 272         |
| ? <i>fracta</i> .....                              | <b>70</b>                                         | <i>Cordieria moorei</i> .....               | 221                                       |
| ? var. <i>crassiuscula</i> .....                   | 77                                                | <i>Corimya</i> .....                        | 269                                       |
| ( <i>Leptesthes</i> ) <i>cardiniaeformis</i> ..... | 169                                               | <i>tenuis</i> .....                         | <b>269</b>                                |
| <i>fracta</i> .....                                | 160, 168                                          | <i>Cornulina arnigera</i> .....             | 222                                       |
| <i>macropistha</i> .....                           | <b>141, 160, 168</b>                              | <i>Coroceras</i> .....                      | <b>110, 239</b>                           |
| <i>planumbona</i> .....                            | <b>88, 160, 169</b>                               | <i>Cosceneis</i> .....                      | 203                                       |
| <i>subelliptica</i> .....                          | 105, 160                                          | <i>Costella</i> .....                       | 107                                       |
| <i>subelliptica</i> var. ....                      |                                                   | <i>Crania</i> .....                         | 119, 121, 177, 257                        |
| <i>moreauensis</i> .....                           | 105                                               | <i>modesta</i> .....                        | <b>121, 177</b>                           |
| <i>nebrascensis</i> .....                          | 105, 160, 168                                     | <i>permiana</i> .....                       | <b>257</b>                                |
| <i>nucalis</i> .....                               | <b>70, 99</b>                                     | <i>reposita</i> .....                       | 119                                       |
| <i>obesa</i> .....                                 | <b>140, 160, 169</b>                              | <i>sheldoni</i> .....                       | <b>119</b>                                |
| <i>occidentalis</i> .....                          | 105, 160, 168                                     | <i>Cranidae</i> .....                       | 121                                       |
| <i>powelli</i> .....                               | <b>137</b>                                        | <i>Crassatella</i> .....                    | 93, 99, 143, 208, 211, 213, 217, 237, 260 |
| <i>pyriformis</i> .....                            | 168                                               |                                             | 263, 268, 270, 271                        |
| <i>subelliptica</i> .....                          | 168                                               | <i>alta</i> .....                           | <b>211, 213, 271</b>                      |
| ? <i>subtrigonalis</i> .....                       | <b>70, 99</b>                                     | <i>cimarronensis</i> .....                  | <b>143</b>                                |
| <i>umbonella</i> .....                             | 168                                               | <i>collina</i> .....                        | <b>217</b>                                |
| ( <i>Veloritina</i> ) <i>bannisteri</i> .....      | <b>77</b>                                         | <i>conradi</i> .....                        | <b>270</b>                                |
| <i>cytheriformis</i> .....                         | 77                                                | <i>cuneata</i> .....                        | 268                                       |
| <i>durkeei</i> .....                               | 112, 160, 168                                     | <i>declivis</i> .....                       | <b>237</b>                                |
| <i>inflexa</i> .....                               | <b>76</b>                                         | <i>delawarensis</i> .....                   | 268, 270                                  |
| <i>Corbis lamellosa</i> .....                      | 220                                               | <i>evansii</i> .....                        | <b>13</b>                                 |
| <i>Corbula</i> .....                               | <b>47, 95, 101, 105, 111, 112, 134, 137, 143,</b> | <i>monmouthensis</i> .....                  | 268                                       |
| 160, 207, 208, 210, 211, 213, 218, 219, 269, 272   |                                                   | <i>obliquata</i> .....                      | <b>271</b>                                |
| <i>aleihensis</i> .....                            | <b>210</b>                                        | ( <i>Pachythærus</i> ) <i>evansi</i> .....  | 99                                        |
| ( <i>Anisorhynchus</i> ?) <i>engelmanni</i> .....  | 112                                               | <i>prora</i> .....                          | 268                                       |
| <i>pyriformis</i> .....                            | 95, 112                                           | <i>shumardi</i> .....                       | <b>93</b>                                 |
| <i>congesta</i> .....                              | <b>207</b>                                        | <i>subplana</i> .....                       | 268                                       |
| <i>crassatelliformis</i> .....                     | 160                                               | <i>subquadrata</i> .....                    | <b>260, 263</b>                           |
| <i>crassimarginata</i> .....                       | 101                                               | <i>syriaca</i> .....                        | <b>208</b>                                |
| <i>crassiplica</i> .....                           | 269                                               | <i>transversa</i> .....                     | 268                                       |
| <i>diegoana</i> .....                              | <b>211, 213</b>                                   | <i>uvasana</i> .....                        | <b>211, 213</b>                           |
| <i>dubiosa</i> .....                               | <b>145</b>                                        | <i>vadosa</i> .....                         | 268                                       |
| <i>engelmanni</i> .....                            | 95                                                | <i>Crassatellidae</i> .....                 | 30, 32, 33, 34, 99, 260, 262, 263, 268    |
| <i>evansana</i> .....                              | <b>256</b>                                        | <i>Crassatellina</i> .....                  | <b>70, 99</b>                             |
| <i>foulkei</i> .....                               | 269                                               | <i>oblonga</i> .....                        | <b>70, 99</b>                             |
| ? <i>gregaria</i> .....                            | <b>15</b>                                         | <i>Crenella</i> .....                       | 28, 98                                    |
| <i>inornata</i> .....                              | <b>18, 101</b>                                    | <i>concentrica</i> .....                    | 220                                       |
| <i>mactriformis</i> .....                          | <b>15, 161, 168</b>                               | <i>elegantula</i> .....                     | <b>28, 98</b>                             |
| <i>moreauensis</i> .....                           | <b>15</b>                                         | <i>granulata cancellata</i> .....           | 47                                        |
| <i>nasuta</i> .....                                | 219                                               | <i>Crenipecten</i> .....                    | 196                                       |
| <i>nematopora</i> .....                            | <b>76, 134, 143</b>                               | <i>hallanus</i> .....                       | <b>196</b>                                |
| ( <i>Neæra</i> ) <i>nasutoides</i> .....           | <b>272</b>                                        | <i>Crepicephalus</i> .....                  | 234, <b>250</b> , 259, 260, 261           |
| <i>occidentalis</i> .....                          | <b>218</b>                                        | ( <i>Bathyrus</i> ?) <i>angulatus</i> ..... | <b>234</b>                                |
| ( <i>Pachydon</i> ) <i>mactriformis</i> .....      | 105                                               | <i>centralis</i> .....                      | 261                                       |
| <i>perundata</i> .....                             | 105                                               | ( <i>Loganellus</i> ) <i>anytus</i> .....   | <b>234</b>                                |
| <i>subtrigonalis</i> .....                         | 105                                               | <i>centralis</i> .....                      | <b>260</b>                                |
| <i>perundata</i> .....                             | <b>15, 160</b>                                    | <i>granulosus</i> .....                     | <b>234</b>                                |
| ( <i>Potamomya</i> ?) <i>concentrica</i> .....     | <b>22</b>                                         | <i>haguei</i> .....                         | <b>234</b>                                |
| <i>engelmanni</i> .....                            | <b>22</b>                                         | <i>maculosus</i> .....                      | <b>234</b>                                |
| <i>pyriformis</i> .....                            | <b>22</b>                                         | <i>montanensis</i> .....                    | <b>259</b>                                |
| <i>pyriformis</i> .....                            | 161                                               | <i>nitidus</i> .....                        | <b>234</b>                                |
| <i>subcompressa</i> .....                          | 269                                               | <i>planus</i> .....                         | <b>260</b>                                |
| <i>sublineolata</i> .....                          | <b>208</b>                                        | ? <i>quadrans</i> .....                     | <b>234</b>                                |
| <i>subtrigonalis</i> .....                         | <b>15, 160, 168</b>                               | <i>simulator</i> .....                      | <b>234</b>                                |
| <i>subundifera</i> .....                           | <b>137</b>                                        | <i>unisulcatus</i> .....                    | <b>234</b>                                |
| <i>syriaca</i> .....                               | <b>208</b>                                        | <i>planus</i> .....                         | 261                                       |
| <i>tropidophora</i> .....                          | <b>77, 160</b>                                    | <i>Crepidula</i> .....                      | 212, 214                                  |
| <i>undifera</i> .....                              | <b>77, 161, 168</b>                               | ? ———.....                                  | 206                                       |
| var. <i>subundifera</i> .....                      | 161, 168                                          | <i>prærupta</i> .....                       | 50, <b>206</b>                            |
| <i>ventricosa</i> .....                            | <b>15</b>                                         | <i>princeps</i> .....                       | <b>212, 214</b>                           |



|                             | Page.                                                                                                                                                                         |                                   | Page.                       |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------|
| Crinoidea.....              | 26, 33, 37, 40, 41, 42, 43, 44, 45, 55,<br>118, 121, 127, 133, 255, 262                                                                                                       | Cyathocrinus kelloggi.....        | <b>118</b>                  |
| Crinoidea.....              | 232                                                                                                                                                                           | lamellosus.....                   | <b>117</b>                  |
| Criocardium.....            | 99, 268, 271                                                                                                                                                                  | multibrachiatas.....              | 154                         |
| nucleolus.....              | <b>271</b>                                                                                                                                                                    | ? poterium.....                   | <b>64</b>                   |
| Criptogamia.....            | 128                                                                                                                                                                           | quinquelobus.....                 | <b>37, 60</b>               |
| Crucibulum.....             | 212, 214                                                                                                                                                                      | ramosus.....                      | 52                          |
| spinosum.....               | <b>212, 214</b>                                                                                                                                                               | rigidus.....                      | <b>118</b>                  |
| Crustacea.....              | 31, 36, 39, 46, 55, 56, 57, 58, 59, 61, 65,<br>67, 68, 74, 79, 80, 81, 89, 91, 108, 109,<br>121, 126, 129, 136, 148, 149, 153, 159,<br>179, 191, 195, 227, 234, 235, 250, 257 | saffordi.....                     | <b>23, 43</b>               |
| Cruziana.....               | 126, 128                                                                                                                                                                      | sangamonensis.....                | <b>23, 45</b>               |
| linnarssoni.....            | <b>126, 128</b>                                                                                                                                                               | scitulus.....                     | <b>23, 27</b>               |
| rustica.....                | <b>126, 128</b>                                                                                                                                                               | sculptilis.....                   | 27, 42                      |
| Crypta praeurpta.....       | 50                                                                                                                                                                            | stillativus.....                  | 150, 163                    |
| Cryptoceras.....            | 39, 104                                                                                                                                                                       | subtumidus.....                   | <b>37</b>                   |
| Cryptogramma floridana..... | 220                                                                                                                                                                           | wachsmuthi.....                   | <b>26, 60</b>               |
| ? penita.....               | 220                                                                                                                                                                           | Cyathophycus.....                 | <b>186</b>                  |
| Cryptomya.....              | 215, 216                                                                                                                                                                      | reticulatus.....                  | <b>186</b>                  |
| ovalis.....                 | <b>215, 216</b>                                                                                                                                                               | subsphericus.....                 | <b>186</b>                  |
| Cryptonella.....            | 193                                                                                                                                                                           | Cyathophyllidæ.....               | 62, 108, 109, 121, 223      |
| ? circula.....              | <b>193</b>                                                                                                                                                                    | Cyathophyllidæ.....               | 232                         |
| pinonensis.....             | <b>193</b>                                                                                                                                                                    | Cyathophyllum.....                | 62, 108, 109, 223           |
| Cryptorhynchis.....         | 103                                                                                                                                                                           | —— ?.....                         | <b>192</b>                  |
| Ctenobranchiata.....        | 34                                                                                                                                                                            | articum.....                      | <b>62</b>                   |
| Ctenoides acutilineata..... | 47                                                                                                                                                                            | caliculare.....                   | <b>247</b>                  |
| denticulata.....            | 47                                                                                                                                                                            | (Campophyllum ?) neva-            |                             |
| squarrosa.....              | 47                                                                                                                                                                            | dense.....                        | <b>109</b>                  |
| Cucullæa.....               | 98, 111, 203, 209, 218                                                                                                                                                        | corinthium.....                   | <b>247</b>                  |
| exigua.....                 | <b>16</b>                                                                                                                                                                     | corniculum.....                   | 192                         |
| haguei.....                 | <b>111</b>                                                                                                                                                                    | davidsoni.....                    | 192                         |
| (Idonearca ?) cordata.....  | 98                                                                                                                                                                            | helianthoides.....                | 247                         |
| nebrascensis.....           | 98                                                                                                                                                                            | palmeria.....                     | <b>108</b>                  |
| shumardi.....               | 98                                                                                                                                                                            | profundum.....                    | 248                         |
| lintea.....                 | <b>208</b>                                                                                                                                                                    | rugosum.....                      | 192                         |
| nebrascensis.....           | <b>250</b>                                                                                                                                                                    | subcæspitosum.....                | <b>109</b>                  |
| ononcheila.....             | 220                                                                                                                                                                           | turbinatam ?.....                 | 247                         |
| opiformis.....              | <b>209</b>                                                                                                                                                                    | undulatum et multiplicatum.....   | <b>247</b>                  |
| paralella.....              | <b>208</b>                                                                                                                                                                    | vesiculosum ?.....                | 247                         |
| subrotunda.....             | <b>208</b>                                                                                                                                                                    | Cyathopora iowensis.....          | 247                         |
| terminalis.....             | <b>218</b>                                                                                                                                                                    | Cyclas.....                       | 99, 215, 217                |
| transversa.....             | 220                                                                                                                                                                           | estrellana.....                   | <b>217</b>                  |
| (Trigonarca ?) obliqua..... | <b>111</b>                                                                                                                                                                    | formosa.....                      | <b>15</b>                   |
| ? Cucullæarca.....          | 98                                                                                                                                                                            | fragilis.....                     | <b>15</b>                   |
| Cucullifera.....            | <b>222</b>                                                                                                                                                                    | permaera.....                     | 50, <b>217</b>              |
| Cupellæocrinus.....         | 38                                                                                                                                                                            | subellipticus.....                | <b>15</b>                   |
| Cyathaxonia.....            | 52                                                                                                                                                                            | tetrica.....                      | <b>215</b>                  |
| Cyathocrinites.....         | 54, 82, 87                                                                                                                                                                    | Cyclina ? circularis.....         | 48                          |
| fragilis.....               | <b>54, 82</b>                                                                                                                                                                 | Cyclobranchiata.....              | 34                          |
| ? poterium.....             | 83                                                                                                                                                                            | Cyclonema.....                    | 79, 80, 148                 |
| sculptilis.....             | 82                                                                                                                                                                            | bilix.....                        | 79, 148                     |
| tenuidaetylus.....          | <b>54, 82</b>                                                                                                                                                                 | crenulata.....                    | <b>67, 80</b>               |
| Cyathocrinus.....           | 23, 26, 37, 38, 42, 43, 45, 53, 60, 81,<br>117, 118, 150, 154, 163, 249, 251                                                                                                  | Cyclopteris.....                  | 246                         |
| —— ?.....                   | 19                                                                                                                                                                            | moquensis.....                    | <b>246</b>                  |
| angulatus.....              | <b>23, 43</b>                                                                                                                                                                 | Cyclora.....                      | 79                          |
| arboreus.....               | <b>38, 60</b>                                                                                                                                                                 | minuta.....                       | 79                          |
| cornutus.....               | <b>249, 251</b>                                                                                                                                                               | ? parvula.....                    | 79                          |
| ? crassus.....              | <b>23</b>                                                                                                                                                                     | Cylicheia.....                    | 101                         |
| enormis.....                | 37, 60                                                                                                                                                                        | dekayi.....                       | 220                         |
| farleyi.....                | <b>40, 60</b>                                                                                                                                                                 | petrosa.....                      | 50                          |
| granuliferus.....           | 255                                                                                                                                                                           | scitula.....                      | <b>21, 101</b>              |
| intexus.....                | 52                                                                                                                                                                            | ? volvaria.....                   | 101                         |
| iowensis.....               | <b>249, 251</b>                                                                                                                                                               | Cylicnide.....                    | 101                         |
|                             |                                                                                                                                                                               | Cylindrites.....                  | 29                          |
|                             |                                                                                                                                                                               | Cymatopleura ? campylodiscus..... | <b>203</b>                  |
|                             |                                                                                                                                                                               | Cymbella gibba.....               | <b>203</b>                  |
|                             |                                                                                                                                                                               | Cymbopora.....                    | 100                         |
|                             |                                                                                                                                                                               | Cymella.....                      | 48, 101, 134, 261, 264, 268 |



|                                                 | Page.                  |                                              | Page.                              |
|-------------------------------------------------|------------------------|----------------------------------------------|------------------------------------|
| <i>Cymella bella</i> .....                      | 101                    | <i>Cyrena securis</i> .....                  | 143                                |
| <i>meeki</i> .....                              | 228                    | ( <i>Veloritina</i> ) <i>durkeei</i> .....   | 135                                |
| <i>Cymomia lamarekii</i> .....                  | 222                    | <i>erecta</i> .....                          | 137                                |
| <i>Cyphaspis</i> .....                          | 148, 191               | <i>Cyrenidæ</i> .....                        | 99, 105, 112, 135                  |
| ? <i>brevimarginatus</i> .....                  | 191                    | <i>Cyrtia</i> .....                          | 119                                |
| <i>christyi</i> .....                           | 148                    | <i>curvilineata</i> .....                    | 119                                |
| <i>Cyphosoma texanum</i> .....                  | 233                    | <i>Cyrtina</i> .....                         | 57, 58, 62, 193                    |
| <i>Cypricardella</i> .....                      | 117, 194, 197          | <i>billingsi</i> .....                       | 62                                 |
| <i>quadrata</i> .....                           | 117                    | <i>dalmani</i> .....                         | 57                                 |
| <i>Cypricardia</i> .....                        | 225, 260, 262          | <i>davidsoni</i> .....                       | 193                                |
| <i>acutifrons</i> .....                         | 226                    | <i>hamiltonensis</i> .....                   | 62, 193                            |
| <i>arcodes</i> .....                            | 226                    | <i>panda</i> .....                           | 62                                 |
| ( <i>Avicula</i> ?) <i>veneris</i> .....        | 226                    | <i>triquetra</i> .....                       | 58                                 |
| <i>imbricata</i> .....                          | 226                    | <i>Cyrtoceras</i> .....                      | 25, 46, 59, 91, 129, 138, 195, 236 |
| <i>occidentalis</i> .....                       | 232                    | ( <i>Aploceras</i> ) <i>curtum</i> .....     | 46                                 |
| <i>ptærupta</i> .....                           | 226                    | <i>cessator</i> .....                        | 236                                |
| ? <i>rigida</i> .....                           | 117                    | <i>conicum</i> .....                         | 247                                |
| <i>rugulosa</i> .....                           | 224                    | <i>curtum</i> .....                          | 25, 27                             |
| <i>siliqua</i> .....                            | 226                    | <i>dardanus</i> .....                        | 91                                 |
| <i>simplex</i> .....                            | 226                    | <i>dictyum</i> .....                         | 138                                |
| <i>sinuosa</i> .....                            | 224                    | ? <i>dilatatum</i> .....                     | 25, 46                             |
| <i>Cypricardinia</i> .....                      | 90, 194                | <i>nevadense</i> .....                       | 195                                |
| <i>carbonaria</i> .....                         | 67, 90                 | <i>ohioense</i> .....                        | 67                                 |
| <i>indenta</i> .....                            | 194                    | <i>ohioensis</i> .....                       | 81                                 |
| <i>Cypricardites</i> .....                      | 54, 55, 79, 248        | <i>sacculum</i> .....                        | 59                                 |
| ——? .....                                       | 55                     | <i>Cyrtoceratites</i> .....                  | 81                                 |
| ? <i>carinata</i> .....                         | 79                     | <i>Cyrtochilu</i> .....                      | 103                                |
| <i>obliquus</i> .....                           | 55                     | <i>Cyrtolites</i> .....                      | 56, 79, 121, 191, 234              |
| <i>sterlingensis</i> .....                      | 79                     | ? <i>costatus</i> .....                      | 79                                 |
| <i>Cypridæ</i> .....                            | 121                    | <i>dyeri</i> .....                           | 79                                 |
| <i>Cypridinidæ</i> .....                        | 121, 136               | ? <i>gillianus</i> .....                     | 121                                |
| <i>Cyprimeria</i> .....                         | 92, 93, 111, 269       | <i>imbricatus</i> .....                      | 56                                 |
| ? <i>crassa</i> .....                           | 93                     | ( <i>Microceras</i> ) <i>inornatus</i> ..... | 79                                 |
| <i>densata</i> .....                            | 269                    | <i>ornatus</i> .....                         | 79                                 |
| <i>depressa</i> .....                           | 269                    | <i>sinuatus</i> .....                        | 191, 234                           |
| <i>excavata</i> .....                           | 269                    | <i>Cysteophyllum</i> .....                   | 62, 155, 192, 223                  |
| <i>heilprini</i> .....                          | 269                    | <i>americanum</i> .....                      | 192                                |
| <i>spissa</i> .....                             | 269                    | var. <i>articum</i> .....                    | 62                                 |
| <i>subalata</i> .....                           | 111                    | <i>vesiculosum</i> .....                     | 155                                |
| ? <i>tenuis</i> .....                           | 92                     | <i>Cystidea</i> .....                        | 37                                 |
| <i>Cyprina</i> .....                            | 99, 176                | <i>Cystoidea</i> .....                       | 54, 77                             |
| <i>arenaria</i> .....                           | 18, 47                 | <i>Cystoseirites</i> ? .....                 |                                    |
| <i>compressa</i> .....                          | 18                     | <i>Cythere</i> .....                         | 74, 79, 121                        |
| <i>cordata</i> .....                            | 18                     | <i>cincinnatiensis</i> .....                 | 68, 79                             |
| ? <i>dallii</i> .....                           | 176                    | <i>nebrascensis</i> .....                    | 74                                 |
| <i>humilis</i> .....                            | 21, 47                 | <i>simplex</i> .....                         | 121                                |
| <i>laphami</i> .....                            | 48                     | <i>Cytherea</i> .....                        | 207, 211, 213, 216, 218, 219       |
| <i>ovata</i> .....                              | 18, 99                 | <i>deweyi</i> .....                          | 15, 48                             |
| var. <i>compressa</i> .....                     | 99                     | <i>lamarensis</i> .....                      | 48, 159                            |
| <i>subtumida</i> .....                          | 18, 48                 | <i>lenticularis</i> .....                    | 220                                |
| <i>Cyprinidæ</i> .....                          | 260, 266, 268, 271     | <i>leonensis</i> .....                       | 48, 218                            |
| <i>Cypris</i> .....                             | 136                    | ? ( <i>Meretrix</i> ) <i>dariena</i> ? ..... | 216                                |
| ——? .....                                       | 136                    | <i>missouriana</i> .....                     | 48, 243                            |
| <i>Cyrena</i> .....                             | 99, 135, 137, 143, 158 | <i>nebrascensis</i> .....                    | 15, 48                             |
| <i>arenaria</i> .....                           | 47                     | <i>nuttali</i> .....                         | 219                                |
| <i>carletoni</i> .....                          | 76, 158, 167           | <i>orbiculata</i> .....                      | 13, 48                             |
| ( <i>Corbicula</i> ) <i>cytheriformis</i> ..... | 21                     | <i>oregonensis</i> .....                     | 50                                 |
| <i>durkeei</i> .....                            | 66                     | <i>ovata</i> .....                           | 220                                |
| <i>dakotensis</i> .....                         | 99, 167                | <i>owenana</i> .....                         | 16, 48                             |
| <i>holmesi</i> .....                            | 88                     | <i>parvula</i> .....                         | 231                                |
| <i>inflexa</i> .....                            | 143                    | <i>pellucida</i> .....                       | 16, 48                             |
| <i>intermedia</i> .....                         | 15                     | <i>syriaca</i> .....                         | 207                                |
| <i>moreauensis</i> .....                        | 15                     | <i>tenuis</i> .....                          | 13, 48                             |
| <i>occidentalis</i> .....                       | 15                     | <i>texana</i> .....                          | 48, 218                            |

|                                                | Page.                                                  |                                                 | Page.                                                |
|------------------------------------------------|--------------------------------------------------------|-------------------------------------------------|------------------------------------------------------|
| <i>Cytherea tippana</i> .....                  | 48                                                     | <i>Dicellosephalus richmondensis</i> .....      | 189                                                  |
| <i>vespertina</i> .....                        | 50                                                     | <i>iola</i> .....                               | 189                                                  |
| <i>Cytherodon</i> .....                        | 194                                                    | <i>Diceras</i> .....                            | 268                                                  |
|                                                |                                                        | <i>dactyloides</i> .....                        | 268                                                  |
| D.....                                         |                                                        | <i>Dichocrinus</i> .....                        | 23, 42, 43, 54, 63, 82, 83, 84, 91, 118,<br>249, 251 |
| <i>Dalmania</i> .....                          | 39                                                     | <i>angustus</i> .....                           | 118                                                  |
| <i>danae</i> .....                             | 39                                                     | <i>constrictus</i> .....                        | 23, 43                                               |
| <i>Dalmanites</i> .....                        | 57, 58, 79, 81, 109, 186, 195                          | <i>conus</i> .....                              | 23, 42                                               |
| <i>carleyi</i> .....                           | 69, 79                                                 | <i>cornigerus</i> .....                         | 84                                                   |
| <i>danae</i> .....                             | 56                                                     | <i>crassitestus</i> .....                       | 118                                                  |
| <i>intermedius</i> .....                       | 186                                                    | <i>expansus</i> .....                           | 54, 83                                               |
| <i>meeki</i> .....                             | 195                                                    | <i>ficus</i> .....                              | 83, 91                                               |
| ( <i>Odontocephalus</i> ) <i>aegeria</i> ..... | 58                                                     | <i>lineatus</i> .....                           | 63, 82                                               |
| <i>ohioensis</i> .....                         | 67, 81                                                 | <i>ovatus</i> .....                             | 249, 251                                             |
| <i>tridentiferus</i> .....                     | 57                                                     | <i>pisum</i> .....                              | 63, 82                                               |
| <i>Dawsonella meeki</i> .....                  | 167                                                    | ( <i>Pterotocrinus</i> ) <i>chesterensis</i> .. | 23                                                   |
| <i>Decapoda</i> .....                          | 35, 37, 46, 61                                         | <i>crassus</i> .....                            | 23                                                   |
| <i>Delphinula depressa</i> .....               | 221                                                    | <i>striatus</i> .....                           | 249, 251                                             |
| <i>plana</i> .....                             | 221                                                    | <i>Dicraniscus</i> .....                        | 70                                                   |
| <i>Delthyris</i> .....                         | 247, 248                                               | <i>ortoni</i> .....                             | 70                                                   |
| <i>euruteines</i> .....                        | 247                                                    | <i>Dicranobranchia</i> .....                    | 132                                                  |
| <i>expansus</i> .....                          | 248                                                    | <i>Dictyonema fenestrata</i> .....              | 232                                                  |
| <i>Deltodus mercuri</i> .....                  | 246                                                    | <i>Dielasma</i> .....                           | 127, 130, 132                                        |
| <i>Dendrocrinus</i> .....                      | 55, 77, 188                                            | ? <i>bovidens</i> .....                         | 127                                                  |
| <i>casei</i> .....                             | 66                                                     | <i>Dikelocephalus</i> .....                     | 231, 234, 250                                        |
| <i>oswegoensis</i> .....                       | 55                                                     | <i>bilobatus</i> .....                          | 234                                                  |
| <i>retractilis</i> .....                       | 188                                                    | <i>flabellifer</i> .....                        | 234                                                  |
| <i>Dendrograptus</i> .....                     | 187                                                    | <i>gothicus</i> .....                           | 234                                                  |
| <i>compactus</i> .....                         | 187                                                    | <i>granulosus</i> .....                         | 250                                                  |
| <i>simplex</i> .....                           | 187                                                    | <i>iowensis</i> .....                           | 249                                                  |
| <i>tenuiramosus</i> .....                      | 187                                                    | <i>miniscensis</i> .....                        | 250                                                  |
| <i>Dentaliidae</i> .....                       | 34, 101, 132, 264                                      | <i>minnesotensis</i> .....                      | 250                                                  |
| <i>Dentalium</i> .....                         | 26, 34, 44, 74, 86, 93, 95, 101, 127, 132,<br>209, 264 | <i>multicinctus</i> .....                       | 234                                                  |
| <i>annulostriatum</i> .....                    | 65, 86                                                 | <i>pepinensis</i> .....                         | 250                                                  |
| <i>canna</i> .....                             | 127, 132                                               | <i>quadriceps</i> .....                         | 234                                                  |
| <i>cretaceum</i> .....                         | 209                                                    | <i>washatchensis</i> .....                      | 234                                                  |
| ( <i>Ditropa</i> ?) <i>pusillum</i> .....      | 221                                                    | <i>Dimyaria</i> .....                           | 98, 105, 133, 267                                    |
| <i>fragilis</i> .....                          | 14                                                     | <i>Diodora crucibuliformis</i> .....            | 50                                                   |
| <i>gracilis</i> .....                          | 13, 161, 264                                           | <i>Dione</i> .....                              | 100                                                  |
| <i>komookense</i> .....                        | 93                                                     | <i>angustifrons</i> .....                       | 50                                                   |
| <i>meekianum</i> .....                         | 74, 86                                                 | ? <i>brevilineata</i> .....                     | 50                                                   |
| <i>nanainoensis</i> .....                      | 17                                                     | <i>decisa</i> .....                             | 50                                                   |
| <i>pauperculum</i> .....                       | 21                                                     | <i>eufalensis</i> .....                         | 48                                                   |
| ? <i>subquadratum</i> .....                    | 22, 34, 95                                             | <i>lamarensis</i> .....                         | 48                                                   |
| <i>thallus</i> .....                           | 50                                                     | <i>leonensis</i> .....                          | 48                                                   |
| <i>venustum</i> .....                          | 26, 43                                                 | [?] <i>meekiana</i> .....                       | 48                                                   |
| <i>Diadora</i> .....                           | 216                                                    | <i>missouriana</i> .....                        | 48                                                   |
| <i>crucibuliformis</i> .....                   | 216                                                    | <i>nebrascensis</i> .....                       | 48                                                   |
| <i>Diæca</i> .....                             | 132, 133, 134, 135                                     | <i>orbiculata</i> .....                         | 48                                                   |
| <i>Dianchora</i> .....                         | 266                                                    | <i>oregonensis</i> .....                        | 50                                                   |
| <i>echinata</i> .....                          | 266                                                    | <i>ovata</i> .....                              | 220                                                  |
| <i>Diastrophia</i> .....                       | 107                                                    | <i>owenana</i> .....                            | 48                                                   |
| <i>Dibranchiata</i> .....                      | 35, 105, 263                                           | ? <i>pellucida</i> .....                        | 48                                                   |
| <i>Dicellosephalus</i> .....                   | 126, 129, 189, 191                                     | [?] <i>ripleyana</i> .....                      | 48                                                   |
| ? <i>angustifrons</i> .....                    | 189                                                    | [?] <i>tennis</i> .....                         | 48                                                   |
| <i>bilobatus</i> .....                         | 189                                                    | <i>texana</i> .....                             | 48                                                   |
| ? <i>expansus</i> .....                        | 190                                                    | <i>tippana</i> .....                            | 48                                                   |
| <i>finalis</i> .....                           | 191                                                    | <i>uniomeris</i> .....                          | 50                                                   |
| <i>flagricaudus</i> .....                      | 126, 129                                               | <i>vespertina</i> .....                         | 50                                                   |
| <i>inexpectans</i> .....                       | 191                                                    | <i>Diphyphyllum</i> .....                       | 108, 155                                             |
| <i>marica</i> .....                            | 189                                                    | <i>archiaci</i> .....                           | 155                                                  |
| <i>nasutus</i> .....                           | 189                                                    | <i>arundinaceum</i> .....                       | 155                                                  |
| <i>osceola</i> .....                           | 189                                                    | <i>fasciculum</i> .....                         | 108                                                  |
| ? <i>quadriceps</i> .....                      | 189                                                    | <i>simcoense</i> .....                          | 192                                                  |

|                               | Page.                                       |                                          | Page.                                   |
|-------------------------------|---------------------------------------------|------------------------------------------|-----------------------------------------|
| Diphyphyllum stramineum       | 155                                         | Drepanocheilus                           | 48, 102                                 |
| Diplodon                      | 105                                         | Dreissena leucopheata                    | 180                                     |
| Diplograptus                  | 129                                         | Drillia lonsdalii                        | 222                                     |
| Diploschiza                   | 266                                         | texana                                   | 222                                     |
| cretacea                      | 266                                         | Dymyaria                                 | 132, 135                                |
| Discinida                     | 110                                         | Dysnoemya                                | 105                                     |
| Discina                       | 85, 89, 110, 119, 177, 192, 196             | Dystactella                              | 194                                     |
| — ?                           | 110, 192                                    | insularis                                | 194                                     |
| capax                         | 119                                         |                                          |                                         |
| connata                       | 196                                         | E.                                       |                                         |
| convexa                       | 177                                         | Ecculiomphalus                           | 195                                     |
| lodensis                      | 192                                         | devonicus                                | 195                                     |
| lugubris                      | 49                                          | Ecbinianthus mortonis                    | 222                                     |
| manhattanensis                | 20                                          | Echinodermata                            | 19, 24, 26, 33, 37, 40, 41,             |
| minuta                        | 192                                         | 42, 43, 44, 54, 55, 56, 58, 59, 60, 64,  |                                         |
| multilineata                  | 49                                          | 66, 68, 72, 77, 81, 84, 91, 94, 96, 118, |                                         |
| newberryi                     | 196                                         | 127, 130, 131, 133, 136, 138, 144, 147,  |                                         |
| nitida                        | 85, 177, 196                                | 148, 149, 150, 151, 154, 158, 163, 165,  |                                         |
| (Orbiculoidea) newberryi      | 89                                          | 196, 206, 209, 210, 236, 255, 260, 261   |                                         |
| ? pleurites                   | 89                                          | Echinoidea                               | 23, 42, 43, 44, 54, 60, 96              |
| tenuilineata                  | 20                                          | Echinosphærites ?                        | 232                                     |
| Discites                      | 39, 104                                     | Echinus                                  | 206, 209, 210                           |
| tuberculatus                  | 250                                         | bullatus                                 | 210                                     |
| Discofustrellaria bouei       | 220                                         | infulatus                                | 222                                     |
| Discophycus                   | 186                                         | kerakensis                               | 209                                     |
| typicalis                     | 186                                         | libanensis                               | 210                                     |
| Discoplea oregonica           | 229                                         | syriacus                                 | 206                                     |
| atmosphærica                  | 203                                         | Edmondia                                 | 38, 45, 73, 86, 89, 109, 117, 178, 197, |
| Discoscaphites                | 104                                         | 236, 258                                 |                                         |
| Discosorus conoideus          | 232                                         | aspinwallensis                           | 70, 73, 178                             |
| Dispotæa                      | 205                                         | ? calhouni                               | 19, 20                                  |
| constricta                    | 205                                         | burlingensis                             | 117                                     |
| Dithyrocaris                  | 87, 179                                     | ? circularis                             | 197                                     |
| carbonarius                   | 65, 87, 179                                 | ? glabra                                 | 73                                      |
| Ditrupea subcoarctata         | 221                                         | medon                                    | 197                                     |
| Docoglossa                    | 102                                         | myrina                                   | 236                                     |
| Dolabra                       | 56                                          | ? nebrascensis                           | 73                                      |
| ? carinata                    | 68                                          | ovata                                    | 87                                      |
| sterlingensis                 | 40, 56                                      | peroblonga                               | 38, 86                                  |
| Dolatocrinus ornatus          | 66                                          | ? pinonensis                             | 109                                     |
| Doliopsis                     | 222                                         | reflexa                                  | 73                                      |
| Dolium petrosum               | 206                                         | suborbiculata                            | 258                                     |
| Donacilla                     | 99                                          | subtruncata                              | 73                                      |
| Donacinida                    | 269                                         | tapesiformis                             | 89                                      |
| Donax                         | 269                                         | unioniformis                             | 45                                      |
| fordii                        | 269                                         | Edriocrinus                              | 57                                      |
| ? protexta                    | 50, 206                                     | pocilliformis                            | 57                                      |
| Dorycrinus                    | 54, 82                                      | Egeta                                    | 99                                      |
| canaliculatus                 | 82                                          | Egeria inflata                           | 220                                     |
| quenquelobus var. intermedius | 54, 82                                      | plana                                    | 229                                     |
| roemeri                       | 54, 82                                      | Electroma                                | 97                                      |
| unicornis                     | 82                                          | Endolobus                                | 39, 45                                  |
| Dosinia                       | 211, 212, 215, 216, 217, 260, 262, 264, 269 | Enclimatoceras                           | 176, 239                                |
| alta                          | 211, 213, 215, 216, 217                     | (Nautilus) ulrichi                       | 176                                     |
| crecta                        | 269                                         | Enerinites                               | 253                                     |
| gabbi                         | 269                                         | Enerinarus                               | 186                                     |
| gyrata                        | 220                                         | trentonensis                             | 186                                     |
| jurassica                     | 260, 262                                    | varicosatus                              | 186                                     |
| longula                       | 215, 216, 217                               | Endoceras multibulatum                   | 191                                     |
| missouriana ?                 | 264                                         | proteiforme                              | 191                                     |
| montana                       | 217                                         | Endocostea                               | 260, 263                                |
| subobliqua                    | 217                                         | sulcata                                  | 263                                     |
| Dosinia ? tenuis              | 27                                          | typica                                   | 260, 263                                |
| ? Dosiniopsis                 | 100                                         | Endopachys maclurii                      | 220                                     |
| lenticularis                  | 220                                         | Entalis                                  | 101                                     |



|                                            | Page.                                            |
|--------------------------------------------|--------------------------------------------------|
| <i>Entalis paupercola</i> .....            | 101                                              |
| <i>Entolium</i> .....                      | 35, 73, 86, 89, 178                              |
| <i>aviculatum</i> .....                    | 73, 86                                           |
| <i>shumardianum</i> .....                  | 89                                               |
| <i>Ensis curtus</i> .....                  | 50                                               |
| <i>Entomostraca</i> .....                  | 36, 46, 61, 79, 89                               |
| <i>Boecidaris</i> .....                    | 72, 83                                           |
| <i>hallianus</i> .....                     | 52, 72                                           |
| <i>squamosa</i> .....                      | <b>63</b>                                        |
| ? <i>squamosus</i> .....                   | 83                                               |
| <i>Eocystites</i> .....                    | 198                                              |
| <i>primævus</i> .....                      | 198                                              |
| <i>Eoscorpis</i> .....                     | <b>53</b> , 61                                   |
| <i>carbonarius</i> .....                   | 61                                               |
| <i>Ephithemia</i> .....                    | 203                                              |
| <i>Eretmocrinus</i> .....                  | 41, 54                                           |
| <i>Eridophyllum</i> .....                  | 155                                              |
| <i>strictum</i> .....                      | 155                                              |
| <i>Eriphyla</i> .....                      | 99                                               |
| <i>gregaria</i> .....                      | 99                                               |
| <i>Erisocrinus</i> .....                   | <b>35</b> , 36, 37, 45, 63, 72, 82, 85, 150, 163 |
| <i>antiquus</i> .....                      | <b>63</b> , 82                                   |
| ( <i>Ceriocrinus</i> ) <i>planus</i> ..... | 163                                              |
| <i>inflexus</i> .....                      | 163                                              |
| <i>conoideus</i> .....                     | <b>37</b> , 45                                   |
| <i>nebrascensis</i> .....                  | <b>35</b> , 36                                   |
| <i>planus</i> .....                        | <b>150</b>                                       |
| <i>tuberculatus</i> .....                  | <b>37</b> , 45                                   |
| <i>typus</i> .....                         | <b>35</b> , 36, 45, 72, 85, 163                  |
| <i>whitei</i> .....                        | 82, <b>63</b>                                    |
| <i>tubulata</i> .....                      | 222                                              |
| <i>Eschara concentrica</i> .....           | <b>273</b>                                       |
| <i>tuberculata</i> .....                   | <b>273</b>                                       |
| <i>Ethmophyllum</i> .....                  | <b>53</b>                                        |
| <i>whitneyi</i> .....                      | <b>53</b>                                        |
| <i>gracilis</i> .....                      | <b>53</b>                                        |
| <i>Etonia</i> .....                        | 57                                               |
| <i>peculiaris</i> .....                    | 57                                               |
| <i>Eudiscoceras</i> .....                  | <b>110</b> , <b>239</b>                          |
| <i>gabbi</i> .....                         | <b>110</b>                                       |
| <i>Eucalyptocrinus</i> .....               | 148                                              |
| <i>crassus</i> .....                       | 148                                              |
| <i>Eucheilodon</i> .....                   | 237                                              |
| <i>creno-carinata</i> .....                | <b>237</b>                                       |
| <i>Euconactæon</i> .....                   | 29                                               |
| <i>Eulina</i> .....                        | 25                                               |
| <i>aciculata</i> .....                     | 221                                              |
| <i>chrysalis</i> .....                     | <b>77</b>                                        |
| <i>funicula</i> .....                      | <b>77</b>                                        |
| ? <i>inconspicua</i> .....                 | <b>77</b>                                        |
| <i>lugubris</i> .....                      | 221                                              |
| <i>notata</i> .....                        | 221                                              |
| <i>peracuta</i> .....                      | <b>25</b> , 27                                   |
| <i>scale</i> .....                         | 221                                              |
| ? <i>subfusiformis</i> .....               | <b>255</b>                                       |
| <i>Eulimella</i> .....                     | 134, 144, 158                                    |
| <i>funicula</i> .....                      | 134, 144                                         |
| ? <i>chrysalis</i> .....                   | 158                                              |
| ? <i>inconspicua</i> .....                 | 158                                              |
| <i>Eumicrotis</i> .....                    | <b>29</b> , 32, 33, 45, 178, 236                 |
| <i>curta</i> .....                         | 32, 33, 49, 236                                  |
| <i>hawni</i> .....                         | 32, 178                                          |
| <i>var. ovata</i> .....                    | 32                                               |
| <i>sinnata</i> .....                       | 45                                               |
| <i>Eunema</i> .....                        | <b>25</b>                                        |

|                                                              | Page.                                    |
|--------------------------------------------------------------|------------------------------------------|
| <i>Eunema</i> ? <i>salteri</i> .....                         | <b>25</b>                                |
| <i>Eunotia amphioxys</i> .....                               | 229                                      |
| <i>argus</i> .....                                           | 229                                      |
| <i>gibba</i> .....                                           | 203, 229                                 |
| <i>gibberula</i> .....                                       | 229                                      |
| <i>granulata</i> .....                                       | 229                                      |
| <i>librile</i> .....                                         | 203, 229                                 |
| <i>subulata</i> .....                                        | 229                                      |
| <i>textricula</i> .....                                      | 229                                      |
| <i>uncinata</i> .....                                        | 229                                      |
| <i>webstermanni</i> .....                                    | 229                                      |
| <i>zebra</i> .....                                           | 229                                      |
| <i>zebrina</i> .....                                         | 229                                      |
| <i>Euomphalidæ</i> .....                                     | 132                                      |
| <i>Euomphalus</i> ....                                       | 25, 30, 80, 117, 118, 130, 132, 138, 165 |
|                                                              | 179, 195, 197, 235, 248                  |
| <i>ammon</i> .....                                           | 117                                      |
| <i>decewi</i> .....                                          | 80                                       |
| <i>eurekaensis</i> .....                                     | <b>195</b>                               |
| <i>laxus</i> .....                                           | <b>130</b> , 235                         |
| <i>nichleranus</i> .....                                     | <b>233</b>                               |
| ( <i>Omphalotrochus</i> ) <i>whitneyi</i> ....               | <b>30</b>                                |
| ( <i>Planerotinus</i> ) <i>laxus</i> .....                   | 195                                      |
| <i>planodorsatus</i> .....                                   | <b>25</b>                                |
| <i>pernodosus</i> .....                                      | 132                                      |
| ( <i>Raphistoma</i> ?) <i>rotuliformis</i> ....              | <b>65</b>                                |
| <i>trochiscus</i> .....                                      | <b>65</b>                                |
| <i>roberti</i> .....                                         | <b>118</b>                               |
| <i>rugosus</i> .....                                         | 51, 87, 179                              |
| <i>springvalensis</i> .....                                  | <b>138</b> , 165                         |
| ( <i>Straparollus</i> ) <i>ophirensis</i> .....              | <b>235</b>                               |
| <i>subrugosus</i> ....                                       | 197                                      |
| <i>utahensis</i> .....                                       | <b>235</b>                               |
| <i>subplanus</i> .....                                       | <b>232</b>                               |
| <i>umbilicatus</i> .....                                     | <b>25</b>                                |
| <i>Eupachyrcrinus</i> .....                                  | 72, 84, 85, 136, 163                     |
| <i>boydii</i> .....                                          | <b>64</b> , 85                           |
| <i>fayettensis</i> .....                                     | 85                                       |
| <i>platybasis</i> .....                                      | <b>136</b> , 163                         |
| <i>tuberculatus</i> .....                                    | 85                                       |
| <i>verrucosus</i> .....                                      | 72                                       |
| <i>Euphoberia</i> .....                                      | <b>53</b> , 61                           |
| <i>armigera</i> .....                                        | <b>53</b> , 61                           |
| <i>major</i> .....                                           | <b>53</b>                                |
| ??.....                                                      | 61                                       |
| <i>Euproops</i> .....                                        | 61, 179                                  |
| <i>danæ</i> .....                                            | 61, 179                                  |
| <i>colletti</i> .....                                        | <b>179</b>                               |
| <i>Euptycha</i> .....                                        | 29                                       |
| <i>Eurydesma</i> .....                                       | 225                                      |
| <i>cordata</i> ?.....                                        | 224, 225                                 |
| <i>elliptica</i> .....                                       | <b>224</b> , 225                         |
| <i>gibbosa</i> .....                                         | 225                                      |
| <i>globosa</i> .....                                         | <b>224</b>                               |
| <i>sacculus</i> .....                                        | 225                                      |
| <i>Eurypteridæ</i> .....                                     | 61, 187                                  |
| <i>Eurypterus</i> .....                                      | 61, 179                                  |
| ( <i>Anthraconetes</i> ) <i>mazonensis</i> . <b>53</b> , 61, | 179                                      |
| <i>Euspira</i> .....                                         | 143, 158                                 |
| <i>coalvillensis</i> .....                                   | 143                                      |
| <i>utahensis</i> .....                                       | 158                                      |
| <i>Eutomoceras</i> .....                                     | <b>110</b> , <b>239</b>                  |
| <i>laubei</i> .....                                          | <b>110</b>                               |
| <i>Eutropia haleana</i> .....                                | 48                                       |



|                                | Page.                                       |                                             | Page                                      |
|--------------------------------|---------------------------------------------|---------------------------------------------|-------------------------------------------|
| <i>Eutropia perovata</i> ..... | 48                                          | <i>Favosites</i> [whitfieldi] .....         | <b>117</b>                                |
| <i>punctata</i> .....          | 48                                          | whitfieldi .....                            | 126                                       |
| <i>Evactinopora</i> .....      | <b>38</b> , 40, 60                          | <i>Fenestella</i> .....                     | 60, 72, 88, 226, 253                      |
| <i>grandis</i> .....           | <b>60</b>                                   | — ? .....                                   | <b>72</b>                                 |
| <i>radiata</i> .....           | <b>38</b> , 60                              | <i>ampla</i> .....                          | 226                                       |
| <i>sexradiata</i> .....        | <b>60</b>                                   | <i>corticata</i> .....                      | <b>273</b>                                |
| <i>Exogyra</i> .....           | 93, 133, 142, 151, 158, 173, 206, 208, 215, | <i>delicata</i> .....                       | <b>67</b> , 88                            |
| .....                          | 219, 266                                    | <i>fossula</i> .....                        | 226                                       |
| <i>arietina</i> .....          | 173, 219                                    | <i>gracilis</i> .....                       | <b>226</b>                                |
| <i>aquila</i> .....            | 173                                         | <i>intermedia</i> .....                     | <b>273</b>                                |
| <i>boussingaultii</i> .....    | 206                                         | <i>internata</i> .....                      | 226                                       |
| <i>columbella</i> .....        | <b>93</b> , 173                             | <i>media</i> .....                          | <b>226</b>                                |
| <i>costata</i> .....           | 173, 219, 266                               | (Multiporata?) var. <i>lodiensis</i> .....  | 88                                        |
| var. ....                      | 219                                         | <i>norwoodiana</i> .....                    | <b>273</b>                                |
| <i>fluminis</i> .....          | 133                                         | <i>popeana</i> .....                        | 257, <b>273</b>                           |
| <i>densata</i> .....           | <b>208</b>                                  | <i>shumardii</i> .....                      | 72, <b>273</b>                            |
| var. ....                      | 208                                         | <i>subretiformis</i> .....                  | <b>273</b>                                |
| <i>fimbriata</i> .....         | 173, <b>215</b> , 219                       | (Lyropora) <i>retrorsa</i> .....            | <b>60</b>                                 |
| <i>flabellata</i> .....        | 243                                         | <i>trituberculata</i> .....                 | <b>273</b>                                |
| <i>forniculata</i> .....       | <b>151</b> , 158, 173                       | <i>variabilis</i> .....                     | <b>273</b>                                |
| <i>fragosa</i> .....           | 173, <b>215</b> , 219                       | <i>Ficopsis cooperi</i> .....               | 221                                       |
| <i>interrupta</i> .....        | 173                                         | <i>mammillatus</i> .....                    | 221                                       |
| <i>leviscula</i> .....         | 133, 173, 219                               | <i>penitus</i> .....                        | 221                                       |
| <i>matheroniana</i> .....      | 173, 219                                    | <i>remondii</i> .....                       | 221                                       |
| <i>parasitica</i> .....        | 173                                         | <i>Ficus mammillatus</i> .....              | 221                                       |
| <i>plicata</i> .....           | 173                                         | <i>modestus</i> .....                       | 50                                        |
| <i>ponderosa</i> .....         | 133, 173, 255                               | [? ?] <i>ocoyanus</i> .....                 | 50                                        |
| <i>texana</i> .....            | 173, 255                                    | <i>Fishes</i> .....                         | 20                                        |
| <i>walkeri</i> .....           | <b>142</b>                                  | <i>Fissurella</i> .....                     | 39, 212, 214                              |
| <i>walkeri</i> .....           | 173                                         | <i>crenulata</i> .....                      | 212, 214                                  |
| <i>winchelli</i> .....         | <b>151</b> , 158, 173                       | <i>Fistulipora</i> .....                    | 71, 156, 192                              |
|                                |                                             | <i>canadensis</i> .....                     | 156                                       |
|                                |                                             | <i>nodulifera</i> .....                     | <b>72</b>                                 |
|                                |                                             | <i>Flabellatae</i> .....                    | 34                                        |
|                                |                                             | <i>cuneiforme</i> .....                     | 220                                       |
|                                |                                             | <i>Foraminifera</i> .....                   | 19, 29, 31, 64, 71, 85, 91, 177, 250, 257 |
|                                |                                             | <i>Forbesiocrinus</i> .....                 | 23, 26, 37, 44, 60                        |
|                                |                                             | <i>agassizi</i> var. <i>giganteus</i> ..... | <b>26</b> , 60                            |
|                                |                                             | ? <i>norwoodi</i> .....                     | <b>23</b>                                 |
|                                |                                             | <i>monroensis</i> .....                     | <b>26</b>                                 |
|                                |                                             | <i>wortheni</i> .....                       | 83                                        |
|                                |                                             | ? <i>semiovatus</i> .....                   | <b>23</b>                                 |
|                                |                                             | <i>Fragillaria</i> .....                    | 203                                       |
|                                |                                             | <i>aenta</i> .....                          | 229                                       |
|                                |                                             | <i>amphicephala</i> .....                   | 229                                       |
|                                |                                             | <i>rhabdosoma</i> ? .....                   | 203, 229                                  |
|                                |                                             | <i>Fragum</i> .....                         | 268                                       |
|                                |                                             | <i>tenuistriatum</i> .....                  | <b>268</b>                                |
|                                |                                             | <i>Fulvia</i> .....                         | 268                                       |
|                                |                                             | <i>tenuis</i> .....                         | <b>268</b>                                |
|                                |                                             | <i>Fungidae</i> .....                       | 62, 96                                    |
|                                |                                             | <i>Fusilina</i> .....                       | 29, 31, 71, 85, 131, 177, 245             |
|                                |                                             | <i>cylindrica</i> .....                     | 19, 29, 31, 71, 131, 177, 245             |
|                                |                                             | var. <i>ventricosa</i> .....                | <b>19</b>                                 |
|                                |                                             | <i>elongata</i> .....                       | <b>256</b> , 257                          |
|                                |                                             | <i>gracilis</i> .....                       | <b>29</b> , 85, 87                        |
|                                |                                             | <i>robusta</i> .....                        | <b>29</b>                                 |
|                                |                                             | <i>ventricosa</i> .....                     | 85, 87                                    |
|                                |                                             | <i>Fusimitra</i> ? <i>lineata</i> .....     | 221                                       |
|                                |                                             | ? <i>minima</i> .....                       | 221                                       |
|                                |                                             | <i>Fusispira</i> .....                      | 234                                       |
|                                |                                             | <i>compacta</i> .....                       | <b>234</b>                                |
|                                |                                             | <i>Fusus</i> .....                          | 103, 144, 159, 209, 237, 264              |
|                                |                                             | <i>arctatus</i> .....                       | 50                                        |
|                                |                                             | <i>cheyennensis</i> .....                   | <b>261</b> , 264                          |

## F.

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| <i>Fabulina</i> .....                     | 100                                       |
| <i>Fasciolaridae</i> .....                | 103, 264                                  |
| <i>Fasciolaria</i> .....                  | 103, 159, 264                             |
| <i>buccinoides</i> .....                  | <b>14</b> , 103                           |
| <i>cretacea</i> .....                     | <b>14</b>                                 |
| ? (Cryptorhytis) <i>cheyennensis</i> ..   | 103                                       |
| <i>contorta</i> .....                     | 264                                       |
| <i>flexicostata</i> .....                 | 103                                       |
| <i>fusiformis</i> .....                   | 264                                       |
| (Mesorhytis) <i>gracilentia</i> .....     | 103                                       |
| <i>moorei</i> .....                       | 221                                       |
| (Piestoecheilus) <i>alleni</i> .....      | <b>159</b>                                |
| <i>cretacea</i> .....                     | 103                                       |
| <i>culbertsoni</i> .....                  | 103, 264                                  |
| <i>galpiniana</i> .....                   | 103                                       |
| <i>scarboroughi</i> ..                    | 103                                       |
| <i>plicata</i> .....                      | 221                                       |
| <i>Faviphyllum</i> ? <i>rugosum</i> ..... | <b>232</b>                                |
| <i>Favistella</i> .....                   | 130, 155                                  |
| <i>stellata</i> .....                     | 130, 155                                  |
| <i>Favositidae</i> .....                  | 62, 108, 109                              |
| <i>Favosites</i> .....                    | 36, 62, 108, 117, 126, 130, 148, 155, 156 |
| — (?) .....                               | 156, <b>192</b>                           |
| <i>basaltica</i> .....                    | 156, 192                                  |
| <i>divergens</i> .....                    | 130                                       |
| <i>favosus</i> .....                      | 155                                       |
| <i>hemispherica</i> .....                 | 192                                       |
| <i>maxima</i> ? .....                     | 247                                       |
| <i>polymorpha</i> .....                   | 62, 156, 247                              |
| var. ....                                 | 108                                       |
| <i>dubia</i> .....                        | 156                                       |
| <i>ramosa</i> .....                       | 247                                       |

|                                                                   | Page.                                           |                                                | Page.                                |
|-------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------|--------------------------------------|
| <i>Fusus cooperi</i> .....                                        | 221, 222                                        | <i>Gastrochæna americana</i> .....             | 270                                  |
| <i>conybearii</i> .....                                           | 222                                             | <i>Gastrochænidæ</i> .....                     | 260, 263, 270                        |
| <i>constrictus</i> .....                                          | 13                                              | <i>Gastrocecli</i> .....                       | 35                                   |
| <i>contortus</i> .....                                            | 14                                              | <i>Gastrosiphites</i> .....                    | 35                                   |
| <i>corpulentus</i> .....                                          | 206                                             | <i>Genota</i> .....                            | 103                                  |
| <i>culbertsoni</i> .....                                          | 14                                              | <i>Geophila</i> .....                          | 135                                  |
| <i>dakotaensis</i> .....                                          | 14, 49                                          | <i>Gervillia</i> .....                         | 28, 98, 119, 151, 158, 164, 259, 262 |
| <i>ellerii</i> .....                                              | 209                                             | ( <i>Avicula</i> ) <i>sulcata</i> .....        | 51                                   |
| ? <i>flexuocostatus</i> .....                                     | 14, 49                                          | <i>gregaria</i> .....                          | 159                                  |
| <i>galpinianus</i> .....                                          | 14                                              | <i>longa</i> .....                             | 51                                   |
| <i>geniculus</i> .....                                            | 206                                             | <i>montanaensis</i> .....                      | 164                                  |
| <i>haleanus</i> .....                                             | 49                                              | <i>mudgeana</i> .....                          | 151, 158                             |
| <i>haydeni</i> .....                                              | 256                                             | <i>parva</i> .....                             | 51                                   |
| <i>intertextus</i> .....                                          | 18, 49                                          | <i>recta</i> .....                             | 28, 98, 262                          |
| <i>mullicaensis</i> .....                                         | 49                                              | <i>sparsalirata</i> .....                      | 259                                  |
| <i>migrans</i> .....                                              | 50                                              | <i>strigosa</i> .....                          | 119                                  |
| <i>newberryi</i> .....                                            | 14, 49                                          | <i>subtortuosa</i> .....                       | 16, 98                               |
| <i>nebrascensis</i> .....                                         | 256                                             | <i>Gervilliopsis</i> .....                     | 267                                  |
| ( <i>Neptunea</i> ?) <i>gabbi</i> .....                           | 76, 144                                         | <i>ensiformis</i> .....                        | 267                                  |
| <i>utahensis</i> .....                                            | 76                                              | <i>minima</i> .....                            | 267                                  |
| <i>oregonensis</i> .....                                          | 50                                              | <i>Gilbertsocrinus</i> .....                   | 42, 63, 82                           |
| ( <i>Pleurotoma</i> ?) <i>scarboroughi</i> .....                  | 18                                              | <i>bursa</i> .....                             | 42                                   |
| <i>remondii</i> .....                                             | 221                                             | <i>calcaratus</i> .....                        | 42                                   |
| <i>scarboroughi</i> .....                                         | 49                                              | ( <i>Goniasteroidocrinus</i> ) <i>fiscel-</i>  |                                      |
| ? ( <i>Serrifusus</i> ) <i>dakotensis</i> .....                   | 103                                             | <i>lus</i> .....                               | 42                                   |
| <i>shumardi</i> .....                                             | 264                                             | ( <i>Goniasteroidocrinus</i> ) <i>ob-</i>      |                                      |
| ( <i>Strepsidura</i> ) <i>marnochi</i> .....                      | 237                                             | <i>ovatus</i> .....                            | 63, 82                               |
| <i>subturritus</i> .....                                          | 17                                              | ( <i>Goniasteroidocrinus</i> ) <i>te-</i>      |                                      |
| <i>subturrites</i> .....                                          | 49                                              | <i>nuradiatus</i> .....                        | 63, 82                               |
| <i>taiti</i> .....                                                | 222                                             | <i>Glæonema paradoxum</i> .....                | 229                                  |
| <i>tenuilineata</i> .....                                         | 13                                              | <i>Glaucanome</i> .....                        | 72, 127, 131                         |
| <i>tenuilineatus</i> .....                                        | 49                                              | <i>neræidis</i> .....                          | 127, 131                             |
| ? <i>utabensis</i> .....                                          | 159                                             | <i>trilineata</i> .....                        | 72                                   |
| <i>vaughani</i> .....                                             | 17, 49                                          | <i>Globiconcha</i> (?) <i>elevata</i> .....    | 255                                  |
| ? <i>vinculum</i> .....                                           | 49                                              | ( <i>Tylostoma</i> ) <i>tumida</i> .....       | 255                                  |
| G.                                                                |                                                 | <i>Glossidæ</i> .....                          | 99, 134                              |
| <i>Gadus pusillus</i> .....                                       | 221                                             | <i>Glossopteris ampla</i> .....                | 226                                  |
| <i>subcoarctatus</i> .....                                        | 221                                             | <i>browniana</i> .....                         | 226                                  |
| <i>Gafrarium liratum</i> .....                                    | 220                                             | ? <i>cordata</i> .....                         | 226                                  |
| <i>Galaxias</i> .....                                             | 106                                             | <i>elongata</i> .....                          | 226                                  |
| <i>Galeodea</i> ( <i>Galeodaria</i> ) <i>quinquecostata</i> ..... | 222                                             | <i>linearis</i> .....                          | 226                                  |
| <i>Galerites oregonensis</i> .....                                | 227                                             | <i>phillipsii</i> .....                        | 231                                  |
| <i>Galeropsis excentricus</i> .....                               | 221                                             | <i>reticulum</i> .....                         | 226                                  |
| <i>Galerus excentricus</i> .....                                  | 221                                             | <i>Glossus fraterna</i> .....                  | 50                                   |
| <i>Gallionella</i> .....                                          | 203                                             | <i>markoei</i> .....                           | 50                                   |
| <i>crenaria</i> .....                                             | 229                                             | <i>Glycimeris</i> .....                        | 101, 143, 217                        |
| <i>distans</i> ? .....                                            | 203, 229                                        | <i>berthoudi</i> .....                         | 143                                  |
| <i>granulata</i> .....                                            | 229                                             | <i>estrellanus</i> .....                       | 50, 217                              |
| <i>lævis</i> .....                                                | 229                                             | <i>occidentalis</i> .....                      | 101                                  |
| <i>punctata</i> .....                                             | 229                                             | <i>Glyptocrinus</i> .....                      | 77, 187                              |
| <i>undulata</i> .....                                             | 229                                             | <i>argutus</i> .....                           | 187                                  |
| <i>varians</i> .....                                              | 203                                             | <i>baeri</i> .....                             | 69, 77                               |
| <i>Gampsonyx</i> .....                                            | 53                                              | <i>decadactylus</i> .....                      | 77                                   |
| <i>fimbriatus</i> .....                                           | 61                                              | <i>dyeri</i> .....                             | 68, 77                               |
| <i>Gasteropoda</i> .....                                          | 20, 21, 22, 24, 26, 28, 30, 31, 32, 34, 39, 40, | <i>var. subglobosus</i> .....                  | 68, 77                               |
| 42, 43, 44, 45, 56, 57, 59, 60, 63, 65, 67,                       |                                                 | <i>nealli</i> .....                            | 77                                   |
| 68, 74, 79, 80, 84, 86, 89, 90, 91, 93, 94,                       |                                                 | <i>parvus</i> .....                            | 77                                   |
| 95, 101, 105, 107, 108, 111, 112, 117,                            |                                                 | ? <i>subnodosus</i> .....                      | 187                                  |
| 118, 121, 126, 127, 129, 130, 132, 133,                           |                                                 | <i>Gnathodon</i> .....                         | 266                                  |
| 134, 135, 136, 137, 138, 143, 147, 148,                           |                                                 | ? <i>tenuidens</i> .....                       | 266                                  |
| 151, 153, 154, 155, 158, 159, 161, 164,                           |                                                 | <i>Gnathostomata</i> .....                     | 61, 179                              |
| 165, 178, 191, 194, 197, 226, 232, 234,                           |                                                 | <i>Gomphoceras</i> .....                       | 39, 59, 195                          |
| 235, 236, 250, 256, 258, 261, 264, 273                            |                                                 | ( <i>Apioceras</i> ) <i>turbiniforme</i> ..... | 39                                   |
| <i>Gastrochæna</i> .....                                          | 270                                             | <i>sacculum</i> .....                          | 39                                   |
|                                                                   |                                                 | <i>suboviforme</i> .....                       | 195                                  |

|                               | Page.                                |                                   | Page.                                         |
|-------------------------------|--------------------------------------|-----------------------------------|-----------------------------------------------|
| Gomphoceras turbiniforme..... | 59                                   | Grammatodon.....                  | 34, 92, 262                                   |
| Gomphonema clavatum ?.....    | 203                                  | inornatus.....                    | 34, 262                                       |
| gracile.....                  | 229                                  | ? vanouiverensis.....             | 92                                            |
| herculaneum.....              | 229                                  | Grammostomum phyllodes.....       | 47                                            |
| longicolle.....               | 229                                  | Grammysia.....                    | 38, 59, 89, 194, 197                          |
| mamilla.....                  | 229                                  | arcuata.....                      | 197                                           |
| minutissimum.....             | 203, 229                             | ? hannibalensis.....              | 89, 197                                       |
| olar.....                     | 229                                  | minor.....                        | <b>194</b>                                    |
| Gomphonema oregonicum.....    | 229                                  | rhomboidalis.....                 | <b>38</b> , 59                                |
| Goniasteroidocrinus.....      | 42, 53, 63, 81, 82                   | rhomboides.....                   | <b>67</b> , 89                                |
| tuberosus.....                | 42                                   | ventricosa.....                   | <b>67</b> , 89                                |
| Goniatitidae.....             | 110, 132                             | Granatocrinus.....                | 44, 60, 64, 83, 84, 126, 130, 147             |
| Goniatites.....               | 25, 46, 110, 117, 132, 149, 195, 236 | cornutus.....                     | 44                                            |
| compactus.....                | <b>38</b> , <b>87</b>                | glaber.....                       | <b>64</b> , 84                                |
| desideratus.....              | <b>195</b>                           | granulosus.....                   | 83                                            |
| globulosus.....               | <b>25</b> , 46                       | loboblastus.....                  | 126, 130, 147                                 |
| var. excelsus.....            | 92                                   | melonoides.....                   | <b>64</b> , 83                                |
| goniobolus.....               | <b>110</b>                           | neglectus.....                    | <b>64</b> , 83                                |
| iowensis.....                 | <b>25</b> , 46                       | norwoodi.....                     | 40, 60, 83                                    |
| kingii.....                   | <b>236</b>                           | pisum.....                        | <b>64</b> , 83                                |
| lyoni.....                    | <b>25</b> , 42                       | projectus.....                    | 60                                            |
| oweni.....                    | 149                                  | shumardi.....                     | <b>40</b> , 60                                |
| opisnus.....                  | <b>117</b>                           | Granoarea.....                    | 98                                            |
| Goniobasis.....               | 95, 106, 112, 135, 137, 141, 161     | Graphioerinus.....                | 85                                            |
| arcta.....                    | 95                                   | dactylus.....                     | 85                                            |
| ? arcta.....                  | 221                                  | Graptolithus.....                 | 126, 129, 187                                 |
| chrysaloidea.....             | <b>137</b> , 161, 168                | annectans.....                    | <b>187</b>                                    |
| chrysallis.....               | <b>70</b> , 161, 168                 | (Climacograptus) ramulus.....     | <b>126</b> , 129                              |
| cleburni.....                 | <b>137</b> , 161, 167                | (Diplograptus) hypniformis.....   | 126, 129                                      |
| convexa.....                  | 106, 161, 169                        | pistis.....                       | 129                                           |
| var. impressa.....            | 106, 169                             | quadrimucronatus.....             | 126, 129                                      |
| endlichii.....                | <b>141</b> , 161, 168                | Gratelupia?.....                  | 212, 214                                      |
| fremontii.....                | 221                                  | mactropsis.....                   | <b>212</b> , 214                              |
| gracilenta.....               | 106, 161, 169                        | Griffithides.....                 | 39, 198                                       |
| ? insculpta.....              | <b>77</b>                            | portlocki.....                    | 198                                           |
| invenusta.....                | 106, 161, 169                        | Gryphæa.....                      | 28, 30, 33, 97, 133, 172, 173, 208, 219, 233, |
| macilenta.....                | 161, 168                             | 236, 245, 259, 262, 266, 270, 271 |                                               |
| nebrascensis.....             | 106, 135, 161, 169                   | bryani.....                       | 270                                           |
| nodulifera.....               | <b>70</b>                            | var. precedens.....               | <b>270</b>                                    |
| ? nodulosa.....               | 221                                  | calceola.....                     | 95                                            |
| ? omitta.....                 | 106, 161, 169                        | var. nebrascensis.....            | 28, 33,                                       |
| simpsoni.....                 | 95, 112                              | 172, 236, 262                     |                                               |
| ? simpsoni.....               | 221                                  | capuloides.....                   | <b>208</b>                                    |
| sublævis.....                 | 106, 161, 169, 221                   | dilatata.....                     | 241, 242                                      |
| ? subtortuosa.....            | 106, 161, 169, 221                   | var. tucumcarii.....              | 241, 243                                      |
| tenera.....                   | 135, 170                             | mucronata.....                    | 173                                           |
| ? tenera.....                 | 221                                  | mutabilis.....                    | 179                                           |
| tenuicarinata.....            | 106, 135, 162, 169                   | nebrascensis.....                 | 180                                           |
| ? tenuicarinata.....          | 221                                  | navia.....                        | 173                                           |
| Goniochasma.....              | 48, 101                              | pitcheri.....                     | 173, 219, 233, 241, 242, 243, 245,            |
| stimpsoni.....                | 48                                   | 253, 255                          |                                               |
| Goniocylindrites.....         | 29                                   | var.....                          | 133                                           |
| Goniomya.....                 | 92, 100, 164                         | navia.....                        | 233, 245                                      |
| americana.....                | <b>15</b> , 100                      | sinuata var. americana.....       | 243                                           |
| borealis.....                 | 92                                   | thirsæ.....                       | 173                                           |
| montanaensis.....             | 164                                  | vesicularis.....                  | 97, 173, 208, 266, 270, 271                   |
| Goniophora.....               | 194                                  | vomer.....                        | 173                                           |
| perangulata.....              | 194                                  | Gryphæostrea.....                 | 97, 270                                       |
| Gonostoma yatesii.....        | 180                                  | vomer.....                        | 270                                           |
| Gorgoniidae.....              | 96                                   | Gryphorhynchus.....               | <b>29</b>                                     |
| Gouldia.....                  | 268                                  | Gryphostrea eversa.....           | 220                                           |
| conradi.....                  | <b>268</b>                           | Gulnaria.....                     | 105                                           |
| decemnaria.....               | 268                                  | ? Gymnotoceras.....               | <b>110</b> , <b>239</b>                       |
| declivis.....                 | 268                                  | blakei.....                       | 110, 239                                      |
| paralis.....                  | 268                                  | rotelliforme.....                 | <b>110</b> , <b>239</b>                       |



|                                  | Page.              |                                | Page.                                      |
|----------------------------------|--------------------|--------------------------------|--------------------------------------------|
| Gypidula .....                   | 193                | Helix .....                    | 28, 106, 107, 135, 137, 141, 153, 161      |
| Gyraulus .....                   | 34, 106, 153       | (Aglaiia) fidelis .....        | 180                                        |
| Gyroceras .....                  | 59, 63, 154        | evansi .....                   | <b>21</b>                                  |
| burlingtonensis .....            | <b>250</b>         | evanstonensis .....            | <b>111</b> , 169                           |
| constrictum .....                | <b>59</b>          | kanabensis .....               | <b>137</b> , 163                           |
| cornutes .....                   | <b>247</b>         | leidyi .....                   | <b>14</b> , 107, 135, 170                  |
| elrodi .....                     | <b>154</b>         | (Monodon?) dallii .....        | 180                                        |
| logani .....                     | <b>63</b>          | occidentalis .....             | <b>17</b>                                  |
| (Nautilus?) inelegans .....      | <b>67</b>          | (Patula) perspectiva .....     | 180                                        |
| rockfordensis .....              | 59                 | sepulta .....                  | <b>153</b>                                 |
| (Trochoceras?) ohioensis .....   | <b>67</b>          | peripharia .....               | <b>137</b> , 170                           |
| Gyroceratites .....              | 81                 | riparia .....                  | <b>137</b> , 170                           |
| (Nautilus) inelegans .....       | 81                 | ? sepulta .....                | 169                                        |
| ?(Trocheras) ohioensis .....     | 81                 | spatiosa .....                 | <b>28</b> , 221                            |
| Gyroides .....                   | 102, 111           | veterna .....                  | <b>28</b> , 170                            |
| conradi .....                    | 102                | ? veterna .....                | 107                                        |
| depressa .....                   | <b>111</b>         | vetusta .....                  | 106, 161, 169                              |
| Gyrorbis .....                   | 35                 | vitrinoides .....              | <b>17</b>                                  |
| H. ....                          |                    | (Zonites) marginicola .....    | 170                                        |
| Hadrophyllum .....               | 165                | Helicoceras tortum .....       | <b>18</b> , 49                             |
| glans .....                      | 165                | Heliolites .....               | 155                                        |
| Haliotidae .....                 | 39                 | elegans .....                  | 155                                        |
| Halobia .....                    | 110                | Helisoma .....                 | 34, 106                                    |
| (Daonella) lommeli .....         | 110                | Helonix thallus .....          | 50                                         |
| Halysites .....                  | 155                | Hemiasster .....               | 96                                         |
| catenulata .....                 | 155                | elegans .....                  | <b>255</b>                                 |
| Haminea .....                    | 101, 264           | ? humphreysanus .....          | <b>18</b> , 96                             |
| minor .....                      | 101                | Hemicystites .....             | 78                                         |
| occidentalis .....               | 101                | (Cystaster) granulatus .....   | 78                                         |
| subcylindrica .....              | 101, 264           | stellatus .....                | 78                                         |
| Hamites larvatus .....           | 220                | Hemifusus horni .....          | 221                                        |
| fremonti .....                   | <b>243</b>         | Hemipronites .....             | 31, 56, 72, 78, 85, 89, 108, 109, 131, 177 |
| leai .....                       | 49                 | chemungensis var. arctostri-   |                                            |
| mortoni .....                    | <b>14</b>          | ata .....                      | 108                                        |
| verneuilli .....                 | 49                 | crassus .....                  | 31, 72, 85, 177                            |
| Haploscapa .....                 | <b>222</b>         | crenistris .....               | 109, 131                                   |
| (Cucullifera) eccentrica .....   | <b>222</b>         | subplanus .....                | 56                                         |
| grandis .....                    | <b>222</b>         | Hemitrypa? .....               | 226                                        |
| Harpaga tippiana .....           | 48                 | Hercoglossa .....              | 104                                        |
| Harpes escanabiae .....          | <b>232</b>         | Heteractia duclosii .....      | 220                                        |
| Harttia .....                    | <b>198</b>         | Heteroceras .....              | 93, 104, 261, 265                          |
| matthewi .....                   | <b>198</b>         | ? angulatum .....              | 49, 104                                    |
| Helcion .....                    | 14                 | cheyennensis .....             | 49, 104                                    |
| alveolus .....                   | <b>14</b>          | ? cochleatum .....             | 104                                        |
| carinatus .....                  | <b>14</b>          | cooperi .....                  | 93                                         |
| patilliformis .....              | <b>14</b>          | ? nebrascense .....            | 104, 265                                   |
| sexsulcatus .....                | <b>14</b>          | newtoni .....                  | <b>261</b> , 265                           |
| subovatus .....                  | <b>14</b>          | oweni .....                    | 49                                         |
| Helcium alveolum .....           | 21                 | tortum .....                   | 49, 104                                    |
| carinatum .....                  | 21                 | ? umbilicatum .....            | 104                                        |
| patelliforme .....               | 21                 | Heterocrinus .....             | 37, 55, 77                                 |
| sexsulcatum .....                | 21                 | (Anomalocrinus) incurvus ..... | <b>37</b>                                  |
| subovatum .....                  | 21                 | crassus .....                  | 91                                         |
| Helicernus .....                 | <b>224</b> , 227   | constrictus .....              | 77                                         |
| fuegiensis .....                 | <b>224</b> , 227   | exilis .....                   | 77                                         |
| Helicidae .....                  | 106, 107, 135, 180 | exiguus .....                  | <b>68</b>                                  |
| Helicoceras .....                | 104, 135, 261, 265 | heterodactylus .....           | 77                                         |
| ? angulatum .....                | <b>21</b> , 49     | (Iocrinus) subcrassus .....    | 77                                         |
| tortus .....                     | <b>18</b>          | juvenis .....                  | 77                                         |
| mortoni var. tennicostatum ..... | 104                | laxus .....                    | 77                                         |
| pariense .....                   | <b>135</b>         | simplex .....                  | 77                                         |
| tennicostatus .....              | <b>19</b>          | subcrassus .....               | <b>37</b> , 55, 68                         |
| stevensoni .....                 | <b>261</b> , 265   | Heteromyaria .....             | 97, 263, 267                               |
| Helicotoma .....                 | 191                | Hettangia .....                | 262                                        |
| sp ? .....                       | 191                | americana .....                | <b>76</b>                                  |



|                              | Page.                             |                                             | Page.                                   |
|------------------------------|-----------------------------------|---------------------------------------------|-----------------------------------------|
| Himantidium arcus .....      | 229                               | Illanurus curekensis .....                  | <b>191</b>                              |
| Himmites .....               | 216                               | Illenus .....                               | 36, 55, 80, 91, 186                     |
| crassa .....                 | <b>216</b>                        | (Bumastus) graftonensis .....               | <b>65</b> , 91                          |
| crassus .....                | 49                                | insignis .....                              | 80                                      |
| giganteus .....              | 49                                | crassicauda .....                           | 55                                      |
| Hipponyx borealis .....      | 21                                | indeterminatus .....                        | <b>186</b>                              |
| pygmaea .....                | 221                               | milleri .....                               | <b>186</b>                              |
| Hippurites .....             | 209, 210                          | taurus .....                                | 55                                      |
| liratus .....                | <b>210</b>                        | trentonensis? .....                         | 248                                     |
| plicatus .....               | <b>210</b>                        | Incertæ sedes .....                         | 261                                     |
| syriacus .....               | <b>209</b>                        | Inoceramus .....                            | 29, 30, 93, 95, 97, 111, 127, 133, 136, |
| Holaster .....               | 206                               | 143, 207, 208, 209, 218, 245, 253, 263, 267 |                                         |
| comanchesi .....             | <b>243</b>                        | — ? .....                                   | 92, 231                                 |
| simplex .....                | <b>255</b>                        | (Actinoceramus) costellatus .....           | 47                                      |
| syriacus .....               | <b>206</b>                        | altus .....                                 | <b>70</b> , 263                         |
| Holactypus planatus .....    | <b>233</b> , 255                  | aratus .....                                | <b>208</b>                              |
| Holopea .....                | 39                                | aviculoides .....                           | <b>21</b>                               |
| (Cyclora) nana .....         | <b>67</b>                         | balchii .....                               | <b>21</b>                               |
| (Isonema) depressa .....     | <b>39</b>                         | barabini .....                              | 92, 134, 263, 267, 274                  |
| Holostomata .....            | 264                               | (Catillus) balchii .....                    | 97                                      |
| Homala .....                 | 100                               | convexus .....                              | 97                                      |
| Homalina .....               | 100                               | crispisii?, var. subcom-                    |                                         |
| Homocrinus .....             | 91                                | pressus .....                               | 97                                      |
| angustatus .....             | <b>64</b> , 91                    | barabini .....                              | 97                                      |
| Hormomya .....               | 98                                | incurvatus .....                            | 97                                      |
| Huronia annulata .....       | <b>232</b>                        | proximus .....                              | 97                                      |
| vertebralis .....            | 232                               | ?, var. sub-                                |                                         |
| Hyalina .....                | 106, 161                          | circularis .....                            | 97                                      |
| ? evansi .....               | 106, 161, 169                     | sagensis, var. nebras-                      |                                         |
| ? occidentalis .....         | 106, 161, 169                     | censis .....                                | 97                                      |
| Hybocrinus .....             | 55                                | sublævis .....                              | 97                                      |
| ? incurvus .....             | 55                                | tenuilineatus .....                         | 97                                      |
| Hydreinocrinus .....         | 121                               | tenuirostris .....                          | 97                                      |
| verrucosus .....             | <b>121</b>                        | undabundus .....                            | 97                                      |
| Hydrobia .....               | 106, 137, 162                     | vanuxemi .....                              | 97                                      |
| anthonii .....               | 221                               | conradi .....                               | <b>13</b>                               |
| anthonyi .....               | 106, 162, 170                     | confertim-annulatus .....                   | 218, 253, 255                           |
| ? culimoides .....           | 107, 162, 170                     | convexus .....                              | <b>13</b>                               |
| recta .....                  | <b>137</b> , 170                  | crassalatus .....                           | <b>133</b>                              |
| subconica .....              | 107, 162, 170                     | crispisii .....                             | 218, 274                                |
| utahensis .....              | <b>137</b> , 169                  | ? .....                                     | 245                                     |
| warrenana .....              | 106, 162, 170                     | var. subundatus .....                       | 92                                      |
| Hydrozoa .....               | 126, 129                          | cuneatus .....                              | <b>21</b>                               |
| Hyalithes .....              | 126, 129, 189, 191, 195, 198, 199 | deformis .....                              | 111, 134                                |
| — ? .....                    | 195                               | depressus .....                             | <b>134</b>                              |
| acadica .....                | <b>198</b>                        | dimidius .....                              | <b>127</b> , 134                        |
| (Camarotheca) emmonsii ..... | 199                               | elevatus .....                              | <b>209</b>                              |
| carbonaria .....             | <b>198</b>                        | erectus .....                               | <b>111</b>                              |
| daniianus .....              | <b>198</b>                        | exogyroides .....                           | <b>29</b>                               |
| micmac .....                 | <b>198</b>                        | flaccidus .....                             | <b>134</b>                              |
| primordialis .....           | 126, 129, 189                     | fragilis .....                              | <b>13</b> , 93, 133, 263, 274           |
| shaleri .....                | <b>199</b>                        | gilberti .....                              | <b>136</b> , 143                        |
| vanuxemi .....               | <b>191</b>                        | howelli .....                               | <b>136</b> , 143                        |
| Hyridella .....              | 105                               | (Inoceramus) altus .....                    | 97                                      |
| I. .....                     |                                   | fragilis .....                              | 97                                      |
| Idonearca .....              | 98, 134, 263, 267, 270            | incurvus .....                              | <b>16</b>                               |
| antrosa .....                | 267                               | lerouxii .....                              | <b>243</b>                              |
| compressirostra .....        | <b>270</b>                        | lynchii .....                               | <b>207</b>                              |
| medians .....                | <b>270</b>                        | (Mytiloides) problematicus .....            | 97                                      |
| shumardi .....               | 263                               | var. .....                                  |                                         |
| tippana .....                | 267                               | aviculoides .....                           | 98                                      |
| vulgaris .....               | 267                               | mytilopsis .....                            | <b>218</b>                              |
| Igoceras .....               | 40                                | nebrascensis .....                          | <b>250</b>                              |
| Illanurus .....              | 191                               | ? obliqua .....                             | <b>30</b>                               |
|                              |                                   | oblongus .....                              | 143                                     |

|                                       | Page.                  |                                              | Page.                               |
|---------------------------------------|------------------------|----------------------------------------------|-------------------------------------|
| <i>Inoceramus perovalis</i> .....     | 267                    | <i>L.</i>                                    |                                     |
| perplexus .....                       | 260, 263               | <i>Lacina</i> .....                          | 219                                 |
| pertenuis .....                       | 16                     | <i>Lacunaria alabamensis</i> .....           | 221                                 |
| problematicus .....                   | 95, 111, 133, 245, 273 | erecta .....                                 | 221                                 |
| problematicus? .....                  | 263                    | <i>Lamellibranchiata</i> .....               | 20, 26, 27, 28, 29, 30, 32, 33, 38, |
| pro-obliquus .....                    | 267                    | 40, 41, 42, 43, 44, 54, 55, 56,              |                                     |
| pseudo-mytiloides .....               | 253                    | 58, 59, 61, 64, 66, 68, 73, 79,              |                                     |
| ? rectangulus .....                   | 30                     | 80, 84, 86, 89, 90, 91, 92, 93,              |                                     |
| sagensis .....                        | 250, 263, 267, 274     | 94, 95, 97, 105, 108, 110,                   |                                     |
| var. quadrans .....                   | 267                    | 112, 148, 149, 190, 194, 196,                |                                     |
| simpsoni .....                        | 22, 95, 111, 263       | 235, 236, 260, 262, 263, 271                 |                                     |
| subcompressus .....                   | 21                     | <i>Lamellopora</i> .....                     | 247                                 |
| sublævis .....                        | 13, 263                | infundibularia .....                         | 217                                 |
| subundatus .....                      | 27                     | <i>Lamna texana</i> .....                    | 246                                 |
| sulcatus .....                        | 47                     | <i>Lamprodoma elongata</i> .....             | 222                                 |
| syriacus .....                        | 209                    | phillipsii .....                             | 222                                 |
| tenuilineatus .....                   | 13, 263, 274           | <i>Lampsilis</i> .....                       | 105                                 |
| tenuirostriatus .....                 | 29                     | <i>Lapparia mooreana</i> .....               | 221                                 |
| texanus .....                         | 218                    | <i>Latia dallii</i> .....                    | 166, 170                            |
| umbonatus .....                       | 18                     | <i>Latiarca</i> .....                        | 98                                  |
| undabundus .....                      | 29                     | ononcheila .....                             | 220                                 |
| vancouverensis .....                  | 256                    | transversa .....                             | 220                                 |
| vanuxemi .....                        | 21, 263                | <i>Latirus (Persisternia) plicatus</i> ..... | 221                                 |
| ventricosus .....                     | 15                     | <i>Leaia</i> .....                           | 61, 179                             |
| ( <i>Volvicramus</i> ) exogyroides .. | 97                     | tricarinata .....                            | 61, 179                             |
| umbonatus .....                       | 97                     | <i>Leeythiocrinus</i> .....                  | 150, 163                            |
| <i>Inoperculata</i> .....             | 34                     | olliculæformis .....                         | 150, 163                            |
| <i>Insecta</i> .....                  | 37, 47                 | <i>Leda</i> .....                            | 24, 26, 28, 116                     |
| <i>Integripallia</i> .....            | 266, 268               | barrisii .....                               | 116                                 |
| <i>Integropallia</i> .....            | 263                    | bellistriata .....                           | 51                                  |
| <i>Iocrinus</i> .....                 | 188                    | bisulcata .....                              | 28, 47                              |
| trentonensis .....                    | 188                    | compsa .....                                 | 220                                 |
| <i>Iphidea (?) sculptilis</i> .....   | 76                     | corta .....                                  | 26                                  |
| <i>Iridea</i> .....                   | 105                    | fibrosa .....                                | 48, 256                             |
| <i>Isocardia</i> .....                | 205, 207, 270          | longifrons .....                             | 47                                  |
| conradi .....                         | 270                    | ( <i>Nucula</i> ) subscitula .....           | 19                                  |
| crenulata .....                       | 207                    | oregona .....                                | 49, 220, 256                        |
| fraterna .....                        | 50                     | pinnaeformis .....                           | 47                                  |
| ? hodgei .....                        | 68                     | protecta .....                               | 47                                  |
| markoi .....                          | 50, 205                | slackiana .....                              | 47                                  |
| washita .....                         | 243                    | subangulata .....                            | 47                                  |
| <i>Isocardiidæ</i> .....              | 270                    | subscitula .....                             | 20                                  |
| <i>Isochilina</i> .....               | 188                    | willamettensis .....                         | 49, 256                             |
| <i>Isodora</i> .....                  | 107                    | ( <i>Yoldia</i> ) levistriata .....          | 24                                  |
| <i>Isognomen</i> .....                | 29, 32                 | <i>Legumen</i> .....                         | 270                                 |
| <i>Isonema</i> .....                  | 39, 159                | appressum .....                              | 270                                 |
| depressa .....                        | 59                     | planulatum .....                             | 270                                 |
| humilis .....                         | 67                     | <i>Leiopistha</i> .....                      | 127, 134, 264, 268                  |
| <i>Isopleurus curviliratus</i> .....  | 48                     | ( <i>Cymella</i> ) meeki .....               | 264                                 |
| meekianus .....                       | 48                     | undata .....                                 | 101, 134                            |
| <i>Isopoda</i> .....                  | 36, 46, 61, 179        | elegantula .....                             | 268                                 |
| J.                                    |                        | inflata .....                                | 268                                 |
| <i>Janira</i> .....                   | 209, 215, 216          | protecta .....                               | 268                                 |
| affinis .....                         | 49                     | ( <i>Psilomya</i> ) meekii .....             | 127, 134                            |
| bella .....                           | 49, 215, 216           | <i>Leioplax</i> .....                        | 138                                 |
| syriaca .....                         | 209                    | ? turricula .....                            | 138                                 |
| <i>Jeanpaulia radiata</i> .....       | 246                    | <i>Leiopteria</i> .....                      | 194                                 |
| K.                                    |                        | rafineskii .....                             | 194                                 |
| <i>Kutorgina</i> .....                | 189, 234               | <i>Leiorhynchus</i> .....                    | 109, 193                            |
| minutissima .....                     | 234                    | quadricostatus .....                         | 109                                 |
| prospectensis .....                   | 189                    | <i>Lepacrinites</i> .....                    | 77                                  |
| sculptilis .....                      | 189                    | moorei .....                                 | 77                                  |
| whitfieldi .....                      | 189                    | <i>Leperditia</i> .....                      | 80, 126, 129, 188, 191, 195         |
|                                       |                        | alta .....                                   | 80                                  |
|                                       |                        | bivia .....                                  | 126, 129, 191                       |

|                                     | Page.                               |                                  | Page.                                                                              |
|-------------------------------------|-------------------------------------|----------------------------------|------------------------------------------------------------------------------------|
| Leperditia (Isochilina) armata..... | 188                                 | Limnæa (Polyrhytis) similis..... | 22, 95, 112, 170                                                                   |
| rotundata.....                      | 195                                 | tonuicosta.....                  | 16, 221                                                                            |
| Lepidesthes.....                    | 60, 144, 154, 165                   | vetusta.....                     | 22, 95, 170                                                                        |
| colletti.....                       | 144, 154, 165                       | Limnæidae.....                   | 34, 105, 107, 112, 135                                                             |
| Lepidesthes coreyi.....             | 60                                  | Limnæinae.....                   | 34                                                                                 |
| Lepidocentrus.....                  | 63                                  | Limnophila.....                  | 34                                                                                 |
| irregularis.....                    | 63                                  | Limnophysa.....                  | 106                                                                                |
| Lepidoptera.....                    | 37, 47                              | Limopsis.....                    | 98                                                                                 |
| Lepocrinites moorei.....            | 66                                  | ellipsis.....                    | 220                                                                                |
| Leptæna.....                        | 57, 78, 130, 189, 234               | nitens.....                      | 50                                                                                 |
| melita.....                         | 189, 234                            | parvula.....                     | 98                                                                                 |
| nucleata.....                       | 57                                  | pectinularis.....                | 220                                                                                |
| sericea.....                        | 78, 130                             | striato-punctatus.....           | 255                                                                                |
| trilobata.....                      | 250                                 | Limoptera.....                   | 194                                                                                |
| Leptesthes.....                     | 99, 105, 141, 160                   | sarmenticia.....                 | 194                                                                                |
| Leptocælia.....                     | 57                                  | Linearia.....                    | 100, 269                                                                           |
| flabellites.....                    | 57                                  | cancellata-sculpta.....          | 48                                                                                 |
| Leptocardia.....                    | 99, 100, 236                        | contracta.....                   | 269                                                                                |
| carditoidea.....                    | 236                                 | ? formosa.....                   | 100                                                                                |
| typica.....                         | 236                                 | irradians.....                   | 48                                                                                 |
| Leptodesma.....                     | 194, 196                            | metastriata.....                 | 269                                                                                |
| — ?.....                            | 196                                 | Lingula.....                     | 28, 33, 55, 58, 62, 72, 85, 89, 96, 119, 126,<br>129, 133, 177, 189, 192, 198, 262 |
| transversa.....                     | 194                                 | alba-pinensis.....               | 192                                                                                |
| Leptodomus granosus.....            | 20                                  | ampla.....                       | 250                                                                                |
| Leptolimnæa.....                    | 106, 153                            | antiqua.....                     | 231                                                                                |
| Leptopora.....                      | 147, 163                            | brevirostris.....                | 18, 33, 262                                                                        |
| winchelli.....                      | 147, 163                            | ? dawsoni.....                   | 198                                                                                |
| Leptosolen.....                     | 101, 270                            | balli.....                       | 119                                                                                |
| conradi.....                        | 70, 101                             | iowensis.....                    | 247                                                                                |
| Leucocheila.....                    | 159                                 | læna.....                        | 192                                                                                |
| Lichas.....                         | 39, 55, 91                          | ligea.....                       | 192                                                                                |
| boltoni.....                        | 91                                  | var. nevadensis.....             | 192                                                                                |
| cucullus.....                       | 39, 55                              | (Lingulella) membranacea.....    | 89                                                                                 |
| Lichenocrinus.....                  | 66, 69, 77                          | lonensis.....                    | 192                                                                                |
| crateriformis.....                  | 78                                  | ? manticula.....                 | 126, 129, 189                                                                      |
| dyeri.....                          | 77                                  | melie.....                       | 89                                                                                 |
| Lima.....                           | 30, 73, 86, 110, 133, 178, 218, 236 | minuta.....                      | 62                                                                                 |
| acutilineata.....                   | 47                                  | mytiloides.....                  | 85                                                                                 |
| ? cuneata.....                      | 30                                  | nitida.....                      | 28, 96                                                                             |
| denticulata.....                    | 47                                  | ovata.....                       | 223, 225                                                                           |
| leonensis.....                      | 218                                 | pinnaformis.....                 | 250                                                                                |
| (Limatula) erecta.....              | 110                                 | prima.....                       | 231                                                                                |
| pelagica.....                       | 47                                  | quadrata.....                    | 55                                                                                 |
| (Plagiostoma) occidentalis.....     | 236                                 | scotica.....                     | 89                                                                                 |
| recticostata.....                   | 30                                  | var. nebrascensis.....           | 72                                                                                 |
| retifera.....                       | 52, 73, 86, 178                     | subspatulata.....                | 13, 53                                                                             |
| ? sinuata.....                      | 30                                  | umbonata.....                    | 177                                                                                |
| squamosa.....                       | 47                                  | whitei.....                      | 192                                                                                |
| wacoensis.....                      | 133, 218                            | Lingulella davisii.....          | 68                                                                                 |
| Limidæ.....                         | 30, 110, 133                        | lamborni.....                    | 68                                                                                 |
| Limnæa.....                         | 105, 107, 112, 153, 161             | Lingulepis.....                  | 31, 189, 233, 234, 261                                                             |
| (Acella) haldemani.....             | 168                                 | cuneolus.....                    | 260, 261                                                                           |
| ? compactilis.....                  | 169                                 | dakotensis.....                  | 261                                                                                |
| (Leptolimnæa) minuscula.....        | 153                                 | ella.....                        | 234                                                                                |
| (Limnophysa ?) compactilis.....     | 77                                  | mæra.....                        | 189, 233                                                                           |
| nitidula.....                       | 112, 168                            | ? minuta.....                    | 189, 234                                                                           |
| vetusta.....                        | 112                                 | perattenuatus.....               | 260, 261                                                                           |
| meekiana.....                       | 107                                 | pinnaformis.....                 | 261                                                                                |
| meekii.....                         | 170                                 | piniformis.....                  | 31, 68                                                                             |
| minuscula.....                      | 170                                 | prima.....                       | 31                                                                                 |
| nitidula.....                       | 95, 161, 221                        | primaformis.....                 | 259                                                                                |
| (Pleurolimnæa) tenuicostata.....    | 106, 161,<br>169, 221               | Lingulidæ.....                   | 31, 33, 62, 96, 133, 261, 262                                                      |
| (Polyrhytis) kingii.....            | 112, 170                            | Limnæarsonia.....                | 199                                                                                |
| shumardi.....                       | 107, 170                            | sagittatis.....                  | 199                                                                                |

|                                                | Page.                           |
|------------------------------------------------|---------------------------------|
| <i>Linnarssonsonia transversa</i> .....        | 199                             |
| <i>Liopistha</i> .....                         | 47, 101, 261                    |
| ( <i>Cymella</i> ) <i>meeki</i> .....          | <b>261</b>                      |
| <i>protecta</i> .....                          | 101                             |
| <i>Lioplacodes</i> .....                       | 35, 49                          |
| <i>veterna</i> .....                           | 49                              |
| <i>veternus</i> .....                          | 35, 167                         |
| <i>Liopodesthes</i> .....                      | <b>154</b> , 158                |
| <i>lingulifera</i> .....                       | <b>134</b>                      |
| <i>nuptialis</i> .....                         | 134                             |
| ? <i>obscurata</i> .....                       | <b>158</b>                      |
| <i>Lithasia antiqua</i> .....                  | 166, 170                        |
| <i>Lithodendron lineata</i> .....              | 49                              |
| <i>Lithodomus</i> .....                        | 38, 208, 210, 267               |
| <i>adlinis</i> .....                           | 267                             |
| <i>cretaceus</i> .....                         | <b>208</b>                      |
| <i>ripleyana</i> .....                         | 267                             |
| <i>stamineus</i> .....                         | <b>210</b>                      |
| <i>Lithodontium furcatum</i> .....             | 229                             |
| <i>nasutum</i> .....                           | 229                             |
| <i>scorpius</i> .....                          | 229                             |
| <i>Lithophaga</i> .....                        | 38, 61                          |
| <i>lingualis</i> .....                         | 38, 61                          |
| ? <i>pertenuis</i> .....                       | <b>38</b> , 84                  |
| <i>Lithostrotion</i> .....                     | 30, 109, 131, 149, 156, 165     |
| — ?.....                                       | 30, 232                         |
| ? <i>californiense</i> .....                   | <b>30</b>                       |
| <i>canadense</i> .....                         | 149                             |
| <i>mamillare</i> .....                         | 30, 149, 156, 165               |
| <i>microstylum</i> .....                       | <b>165</b>                      |
| <i>whitneyi</i> .....                          | 109, 131                        |
| <i>Lithostylidium</i> .....                    | 229                             |
| <i>amphiodon</i> .....                         | 229                             |
| <i>crenulatum</i> .....                        | 229                             |
| <i>laeve</i> .....                             | 229                             |
| <i>quadratum</i> .....                         | 229                             |
| <i>rude</i> .....                              | 229                             |
| <i>trabecula</i> .....                         | 229                             |
| <i>Littorina</i> .....                         | 212, 214                        |
| <i>pedroana</i> .....                          | <b>212</b> , 214                |
| <i>Littorinidae</i> .....                      | 103                             |
| <i>Lituites</i> .....                          | 80, 91                          |
| <i>grafftonensis</i> .....                     | <b>65</b> , 91                  |
| ? <i>ortoni</i> .....                          | 80                              |
| <i>Loganellus</i> .....                        | 234, 260, 261                   |
| <i>Lonchocephalus</i> .....                    | <b>250</b>                      |
| <i>chippewaensis</i> .....                     | <b>250</b>                      |
| <i>hamulus</i> .....                           | <b>250</b>                      |
| <i>Lophophyllum</i> .....                      | 72, 85, 117, 131, 138, 165, 177 |
| <i>calceola</i> .....                          | <b>117</b>                      |
| <i>expansum</i> .....                          | <b>138</b> , 165                |
| <i>proliferum</i> .....                        | 72, 85, 131, 177                |
| <i>Loxonema</i> .....                          | 25, 27, 46, 86, 152, 195, 197   |
| — ?.....                                       | 195                             |
| <i>approximatum</i> .....                      | <b>195</b>                      |
| <i>attenuata</i> var. <i>semicostata</i> ..... | 67                              |
| <i>bella</i> .....                             | <b>197</b>                      |
| <i>cerithiformis</i> .....                     | <b>25</b> , 46                  |
| <i>eurekensis</i> .....                        | <b>195</b>                      |
| <i>inornata</i> .....                          | <b>25</b>                       |
| <i>kanei</i> .....                             | <b>36</b>                       |
| <i>multicostata</i> .....                      | <b>27</b> , 46                  |
| <i>nitidula</i> .....                          | <b>25</b>                       |
| <i>nobile</i> .....                            | <b>195</b>                      |
| <i>rugosa</i> .....                            | <b>25</b> , 46, 152             |

|                                                        | Page                                 |
|--------------------------------------------------------|--------------------------------------|
| <i>Loxonema scitula</i> .....                          | <b>25</b> , 46                       |
| <i>semicostata</i> .....                               | 86                                   |
| ? <i>subattenuatum</i> .....                           | 195                                  |
| <i>Lucina</i> .....                                    | 80, 99, 131, 153, 207, 208, 263, 268 |
| <i>acutilineata</i> .....                              | <b>206</b>                           |
| <i>debarri</i> .....                                   | <b>157</b>                           |
| <i>cretacea</i> .....                                  | 268                                  |
| ( <i>Diplodonta</i> ?) <i>subundata</i> .....          | 263                                  |
| <i>fibrosa</i> .....                                   | <b>256</b>                           |
| <i>gyrata</i> .....                                    | 220                                  |
| <i>lirata</i> .....                                    | 80                                   |
| <i>occidentalis</i> .....                              | <b>16</b> , 50, 99, 263              |
| var. <i>vent-</i>                                      |                                      |
| <i>ricosa</i> .....                                    | 99                                   |
| ( <i>Paracyclas</i> ) <i>ohioensis</i> .....           | <b>66</b> , 80                       |
| <i>permacra</i> .....                                  | 50                                   |
| <i>profunda</i> .....                                  | <b>153</b> , 157                     |
| <i>safedensis</i> .....                                | <b>209</b>                           |
| <i>smockana</i> .....                                  | <b>268</b>                           |
| <i>subtruncata</i> .....                               | <b>207</b>                           |
| <i>subundata</i> .....                                 | <b>13</b> , 99, 134                  |
| <i>syriaca</i> .....                                   | <b>207</b>                           |
| <i>ventricosa</i> .....                                | 263                                  |
| <i>Lucinidae</i> .....                                 | 30, 99, 110, 134, 263, 268           |
| <i>Lunatia</i> .....                                   | 102, 137, 264                        |
| ? <i>acutispira</i> .....                              | 48                                   |
| <i>concinna</i> .....                                  | 102, 264                             |
| <i>minima</i> .....                                    | 221                                  |
| <i>occidentalis</i> .....                              | 102                                  |
| <i>subetassa</i> .....                                 | 142                                  |
| <i>utahensis</i> .....                                 | <b>137</b>                           |
| <i>Lunulicardium</i> .....                             | 235                                  |
| <i>fragosum</i> .....                                  | 235                                  |
| <i>Lunulites</i> .....                                 | 220                                  |
| <i>bonoi</i> .....                                     | 220                                  |
| ? <i>dactioloides</i> .....                            | <b>217</b>                           |
| <i>duclosii</i> .....                                  | 220                                  |
| <i>interstitia</i> .....                               | 220                                  |
| <i>Lutraria</i> ?.....                                 | 211, 213, 215, 217                   |
| <i>transmontana</i> .....                              | <b>215</b>                           |
| <i>traskei</i> .....                                   | 213                                  |
| <i>Lyellia</i> .....                                   | 155                                  |
| <i>americana</i> .....                                 | 155                                  |
| <i>Lyonsia</i> ( <i>Panopæa</i> ) <i>concava</i> ..... | <b>19</b>                            |
| <i>Lyopomata</i> .....                                 | 96, 133                              |
| <i>Lyosoma</i> .....                                   | <b>164</b>                           |
| <i>powelli</i> .....                                   | 164, 179                             |
| <i>Lyopora</i> .....                                   | 60                                   |
| M.                                                     |                                      |
| <i>Maclurea</i> .....                                  | 130, 191, 234                        |
| — (?).....                                             | 130, 191                             |
| <i>annulata</i> .....                                  | <b>191</b>                           |
| <i>carinata</i> .....                                  | <b>191</b>                           |
| <i>minima</i> .....                                    | <b>234</b>                           |
| <i>subannulata</i> .....                               | <b>191</b>                           |
| <i>Macrocallista</i> .....                             | 100                                  |
| <i>Macrocheilida</i> .....                             | 132                                  |
| <i>Macrocheilus</i> .....                              | 25, 46, 74, 86, 90, 127, 132, 197    |
| — ?.....                                               | <b>46</b> , 197                      |
| <i>altionensis</i> .....                               | 86                                   |
| <i>angulifera</i> .....                                | <b>127</b> , 132                     |
| <i>intercalaris</i> .....                              | <b>25</b> , 46                       |
| var. <i>pulchellus</i> .....                           | 74                                   |
| <i>klipparti</i> .....                                 | <b>68</b> , 90                       |



|                               | Page                                       |                                 | Page.                                  |
|-------------------------------|--------------------------------------------|---------------------------------|----------------------------------------|
| Macrocheilus medialis .....   | <b>25</b> , 46                             | Margarita abyssinus .....       | 48                                     |
| newberryi .....               | 86                                         | mudgeana .....                  | 102                                    |
| pallianus .....               | 51                                         | nebrascensis .....              | 102, 264                               |
| pulchellus .....              | <b>25</b>                                  | Margaritana .....               | 98                                     |
| texanus .....                 | <b>258</b>                                 | nebrascensis .....              | 99, 167                                |
| Macrocyclus .....             | 107                                        | Margaritella .....              | 102                                    |
| spatiosa .....                | 107, 170, 221                              | abotti .....                    | 48                                     |
| Macrodon .....                | 73, 86, 90, 117, 197                       | flexistriata .....              | 102                                    |
| — ? .....                     | 85                                         | Marginella biplicata .....      | 221                                    |
| delicatus .....               | <b>64</b>                                  | Marsupiocrinites .....          | 42                                     |
| hamiltonae .....              | 197                                        | Martesia .....                  | 101, 270                               |
| micronema .....               | <b>40</b>                                  | cuneata .....                   | 101                                    |
| obsoletus .....               | <b>69</b> , 90                             | (Pholas) cretacea .....         | 270                                    |
| parvus .....                  | <b>117</b>                                 | ? roessleri .....               | <b>69</b>                              |
| tenuistriata .....            | 51, 73                                     | Martinia .....                  | 30, 31, 41, 44, 63, 130, 131, 155, 193 |
| tenuistriatus .....           | <b>41</b> , 85                             | Matthevia .....                 | <b>199</b>                             |
| truncatus .....               | <b>197</b>                                 | variabilis .....                | <b>199</b>                             |
| Macrodontina .....            | 34                                         | Mazonia .....                   | <b>61</b>                              |
| Macroscaphites .....          | 104                                        | woodiana .....                  | 61                                     |
| Maerura .....                 | 37, 46, 61, 179                            | Meckella .....                  | 72, 85, <b>120</b> , 121, 131, 177     |
| Maetra .....                  | 93, 100, 111, 207, 211, 213, 215, 218, 259 | striato-costata .....           | 72, 85, 121, 131, 177                  |
| — ? .....                     | 217                                        | Meckoceras .....                | <b>146</b> , 162, <b>239</b>           |
| alta .....                    | <b>16</b>                                  | aplanatum .....                 | <b>146</b> , 162, <b>239</b>           |
| arciformis .....              | <b>207</b>                                 | gracilitatis .....              | <b>146</b> , 163, <b>239</b>           |
| ? canonensis .....            | <b>70</b> , 143                            | var .....                       | 146, 163                               |
| (Cymbophora ?) formosa .....  | 100                                        | mushbachanus .....              | <b>146</b>                             |
| gracilis .....                | 100                                        | mushbachianum .....             | 162, <b>239</b>                        |
| nitidula .....                | 100                                        | Megalaspis .....                | 126, 129                               |
| ? siouxensis .....            | 100                                        | belemnurus .....                | <b>126</b>                             |
| ? utahensis .....             | <b>111</b>                                 | belemnura .....                 | 129                                    |
| warrenana .....               | 100                                        | Megambonia .....                | 79, 194                                |
| diegoana .....                | <b>211</b> , 213                           | jamesi .....                    | <b>68</b> , 79                         |
| emmonsi .....                 | <b>111</b>                                 | occidentalis .....              | <b>194</b>                             |
| formosa .....                 | <b>16</b>                                  | Megaptera .....                 | 56, 148                                |
| gabiotensis .....             | <b>217</b>                                 | casei .....                     | 56                                     |
| gibbsana .....                | <b>27</b> , 93                             | Megistocrinus .....             | 82, 118, 138, <b>251</b>               |
| gracilis .....                | <b>21</b>                                  | crassus .....                   | <b>118</b>                             |
| ? holmesi .....               | 143                                        | evansii .....                   | <b>251</b>                             |
| ? incompta .....              | <b>134</b>                                 | farnsworthi .....               | <b>138</b>                             |
| maia .....                    | <b>259</b>                                 | parvirostris .....              | 82                                     |
| petrosa .....                 | <b>207</b>                                 | plenus .....                    | <b>118</b>                             |
| pervetus .....                | <b>207</b>                                 | (Saccoerinus) whitei .....      | 82                                     |
| siouxensis .....              | <b>21</b>                                  | Melampus .....                  | 158                                    |
| syriaca .....                 | <b>207</b>                                 | — ? .....                       | 158, 167                               |
| texana .....                  | <b>215</b> , 218                           | americana .....                 | <b>166</b> , 169                       |
| (Trigonella) ? arenaria ..... | <b>111</b>                                 | antiquus .....                  | <b>77</b> , 158, 167                   |
| warrenana .....               | <b>16</b>                                  | ? priscus .....                 | <b>22</b>                              |
| Maetridæ .....                | 100, 111, 134, 269, 271                    | Melania .....                   | 28, 112, 137, 162                      |
| Maonia .....                  | 225                                        | anthonyi .....                  | <b>16</b> , 221                        |
| axinia .....                  | 225                                        | areta .....                     | <b>22</b> , 221                        |
| ? carinata .....              | 225                                        | claibornensis .....             | 170                                    |
| elliptica .....               | 225                                        | convexa .....                   | <b>16</b> , 17                         |
| elongata .....                | 225                                        | (Goniobasis ?) sculptilis ..... | <b>65</b>                              |
| fragilis .....                | <b>225</b>                                 | subsculptilis .....             | <b>65</b>                              |
| gigas .....                   | 225                                        | ? wyomingensis .....            | <b>77</b>                              |
| gracilis .....                | 225                                        | humerosa .....                  | <b>22</b> , 221                        |
| grandis .....                 | 225                                        | ? insculpta .....               | 162, 169                               |
| myiformis .....               | 225                                        | invenusta .....                 | <b>17</b>                              |
| ? recta .....                 | 225                                        | larunda .....                   | <b>137</b>                             |
| valida .....                  | 225                                        | minutula .....                  | <b>16</b> , 221                        |
| Maera .....                   | 100                                        | multistriata .....              | <b>16</b> , 221                        |
| Malea .....                   | 216                                        | nebrascensis .....              | <b>16</b>                              |
| ringens .....                 | <b>216</b>                                 | ? nitidula .....                | <b>22</b>                              |
| Malletina .....               | 32                                         | omitta .....                    | <b>17</b>                              |
| Margarita .....               | 102, 264                                   | (Potodoma) veterana .....       | <b>28</b> , 49                         |

|                                                                  | Page.                           |                                                    | Page.                           |
|------------------------------------------------------------------|---------------------------------|----------------------------------------------------|---------------------------------|
| <i>Melania</i> ? <i>sculptilis</i> .....                         | 112, 166, 170                   | <i>Microcylus</i> <i>discus</i> .....              | <b>58</b>                       |
| <i>simpsoni</i> .....                                            | <b>22</b> , 221                 | <i>Microdiscus</i> .....                           | 198                             |
| <i>sublaevis</i> .....                                           | <b>17</b> , 221                 | <i>dawsoni</i> .....                               | 198                             |
| ? <i>subsculptilis</i> .....                                     | 163, 166, 170                   | <i>punctatus</i> .....                             | 198                             |
| <i>subtortuosa</i> .....                                         | <b>17</b> , 221                 | <i>Microdoma</i> .....                             | <b>40</b> , 87                  |
| <i>taylori</i> .....                                             | 166, 170                        | <i>conica</i> .....                                | <b>40</b> , 87                  |
| <i>tenuicarinata</i> .....                                       | <b>17</b> , 221                 | <i>Microdon</i> .....                              | 194, 197                        |
| <i>warrenana</i> .....                                           | <b>17</b>                       | ( <i>Cypricardella</i> ) <i>connatus</i> .....     | <b>197</b>                      |
| <i>wyomingensis</i> .....                                        | 162, 169                        | <i>macrostriatus</i> .....                         | <b>194</b>                      |
| <i>Melaniidae</i> .....                                          | 112, 135                        | <i>Micromeris</i> <i>minutissima</i> .....         | 220                             |
| <i>Melanopsis</i> .....                                          | 166                             | <i>parva</i> .....                                 | 220                             |
| <i>Meleagrinella</i> .....                                       | <b>267</b>                      | <i>Micropurgus</i> <i>minutulus</i> .....          | 221                             |
| <i>abrupta</i> .....                                             | 267                             | <i>Microstizia</i> .....                           | <b>96</b>                       |
| <i>Melina</i> <i>montana</i> .....                               | 50                              | <i>millepunctata</i> .....                         | <b>96</b>                       |
| <i>torta</i> .....                                               | 50                              | <i>Micropyrgus</i> .....                           | 107, 162                        |
| <i>Melinia</i> <i>nitidula</i> .....                             | 221                             | <i>minutulus</i> .....                             | 107, 162, 169                   |
| <i>Melininae</i> .....                                           | 29, 32                          | <i>Milthea</i> .....                               | 99                              |
| <i>Mellita</i> <i>texana</i> .....                               | <b>215</b>                      | <i>Mitra</i> <i>costata</i> .....                  | 221                             |
| <i>Melonites</i> .....                                           | 23                              | <i>flemingii</i> .....                             | 221                             |
| <i>danae</i> .....                                               | <b>23</b>                       | <i>fussoides</i> .....                             | 221                             |
| <i>multipora</i> .....                                           | 43, 60, 212                     | <i>lineata</i> .....                               | 221                             |
| <i>Menetus</i> .....                                             | 34, 106                         | <i>minima</i> .....                                | 221                             |
| <i>Menocephalus</i> .....                                        | <b>250</b>                      | <i>mooreana</i> .....                              | 221                             |
| <i>Meretrix</i> .....                                            | 211, 212, 213, 214              | <i>Mnestia</i> .....                               | 101                             |
| <i>californiana</i> .....                                        | <b>211</b> , 213                | <i>Modiola</i> .....                               | 28, 73, 197, 211, 213, 267, 270 |
| <i>dariena</i> .....                                             | <b>212</b> , 214                | <i>attenuata</i> .....                             | 47                              |
| <i>decisa</i> .....                                              | 50, <b>211</b> , 213            | ( <i>Brachydontes</i> ) <i>multilinigera</i> ..... | <b>76</b>                       |
| <i>tularana</i> .....                                            | <b>211</b> , 213                | <i>burlingtonensis</i> .....                       | <b>267</b>                      |
| <i>uniomeris</i> .....                                           | 50, 211, 213                    | <i>concentrica-costellata</i> .....                | 47                              |
| <i>uvasana</i> .....                                             | <b>211</b> , 213                | <i>contracta</i> .....                             | 50, <b>211</b> , 213            |
| <i>Merista</i> .....                                             | 57                              | <i>cretacea</i> .....                              | 47                              |
| <i>laevis</i> .....                                              | 57                              | <i>ducatelli</i> .....                             | 50                              |
| <i>Meristella</i> .....                                          | 56, 80, 193                     | <i>granulato-cancellata</i> .....                  | 47                              |
| <i>Meristella</i> ? ( <i>Meristina</i> ) <i>cylindrica</i> ..... | 80                              | <i>johnsoni</i> .....                              | <b>270</b>                      |
| ( <i>Whitfieldia</i> ) <i>nasuta</i> .....                       | 193                             | <i>juliae</i> .....                                | 47                              |
| <i>Meroerinus</i> .....                                          | 187                             | <i>julia</i> .....                                 | 267                             |
| <i>corroboratus</i> .....                                        | <b>188</b>                      | ( <i>Lithodomus</i> ?) <i>inflata</i> .....        | <b>270</b>                      |
| <i>typus</i> .....                                               | <b>187</b>                      | <i>meekii</i> .....                                | 47                              |
| <i>Merostomata</i> .....                                         | 61, 179                         | ? <i>nevadensis</i> .....                          | <b>197</b>                      |
| <i>Mesalia</i> .....                                             | 101                             | <i>ovata</i> .....                                 | 270                             |
| <i>kansasensis</i> .....                                         | 102                             | <i>pedernalis</i> .....                            | 47                              |
| <i>striata</i> .....                                             | 221                             | ( <i>Perna</i> ) <i>formosa</i> .....              | <b>28</b> , 49                  |
| <i>Mesodesma</i> .....                                           | 137                             | <i>pertenuis</i> .....                             | 49                              |
| <i>bishopi</i> .....                                             | <b>137</b>                      | <i>saffordi</i> .....                              | 47                              |
| <i>Mesonacis</i> .....                                           | <b>199</b>                      | <i>spiniger</i> .....                              | 50                              |
| <i>Mesorhytis</i> .....                                          | 103                             | ? <i>subelliptica</i> .....                        | 73                              |
| <i>Metaptera</i> .....                                           | 105                             | ( <i>VolSELLA</i> ) <i>subimbricata</i> .....      | 80                              |
| <i>Metis</i> .....                                               | 100                             | <i>Modiolaria</i> .....                            | 98                              |
| <i>Metoptoma</i> .....                                           | 40, 60, 186, 188, 191, 195, 197 | <i>Modiolopsis</i> .....                           | 38, 54, 58, 130, 187, 190       |
| ? <i>analoga</i> .....                                           | <b>191</b>                      | —— (?).....                                        | 130                             |
| <i>billingsi</i> .....                                           | <b>188</b>                      | <i>acutifrons</i> .....                            | <b>224</b>                      |
| <i>cornuta forme</i> .....                                       | <b>186</b>                      | <i>arcodes</i> .....                               | <b>224</b>                      |
| ? <i>devonica</i> .....                                          | <b>195</b>                      | <i>cancellata</i> .....                            | 187                             |
| <i>peroccidens</i> .....                                         | <b>197</b>                      | <i>imbricata</i> .....                             | <b>224</b>                      |
| <i>phillipsi</i> .....                                           | <b>191</b>                      | <i>modiolaris</i> .....                            | 232                             |
| ( <i>Platyceras</i> ) <i>umbella</i> .....                       | <b>40</b>                       | <i>modioliformis</i> .....                         | <b>54</b>                       |
| ? <i>umbella</i> .....                                           | 60                              | <i>occidens</i> .....                              | <b>191</b>                      |
| <i>Michilina</i> .....                                           | 165, 177, 223, 235              | <i>orthonata</i> .....                             | <b>54</b>                       |
| —— ?.....                                                        | 235                             | <i>perovata</i> .....                              | <b>38</b> , 58                  |
| <i>eugeneae</i> .....                                            | <b>177</b>                      | <i>pholadiformis</i> .....                         | <b>232</b>                      |
| <i>expansa</i> .....                                             | <b>165</b>                      | <i>pogonipensis</i> .....                          | <b>191</b>                      |
| <i>placenta</i> .....                                            | <b>165</b>                      | <i>prerupta</i> .....                              | <b>224</b>                      |
| <i>Micrabacia</i> .....                                          | 96                              | <i>siliqua</i> .....                               | <b>224</b>                      |
| <i>americana</i> .....                                           | 96                              | <i>simplex</i> .....                               | <b>224</b>                      |
| <i>Microcylus</i> .....                                          | <b>58</b>                       | <i>subnasuta</i> .....                             | <b>64</b> , 91                  |

|                                                                                                                                                                                                                                                                          | Page.                           |                                      | Page.                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------------|------------------------------------------------------------------|
| Modiomorpha.....                                                                                                                                                                                                                                                         | 110, 194, 197                   | Myacites (Pleuromya) weberensis..... | <b>111</b>                                                       |
| altiforme.....                                                                                                                                                                                                                                                           | <b>194</b>                      | subcompressus.....                   | 164                                                              |
| ambigua.....                                                                                                                                                                                                                                                             | <b>197</b>                      | subellipticus.....                   | 34                                                               |
| ? desiderata.....                                                                                                                                                                                                                                                        | <b>197</b>                      | Myacites unionoides.....             | 49                                                               |
| ? lata.....                                                                                                                                                                                                                                                              | <b>110</b>                      | Myalina.....                         | 24, 32, 44, 45, 73, 82, 86, 132, 151, 178,<br>196, 236, 257, 259 |
| oblonga.....                                                                                                                                                                                                                                                             | <b>194</b>                      | — ?.....                             | 132                                                              |
| obtusa.....                                                                                                                                                                                                                                                              | 194                             | angulata.....                        | <b>24</b> , 32, 44                                               |
| ? ovata.....                                                                                                                                                                                                                                                             | <b>110</b>                      | apachesi.....                        | <b>243</b>                                                       |
| ? pintoensis.....                                                                                                                                                                                                                                                        | <b>197</b>                      | aviculoides.....                     | 21, 32, 236                                                      |
| Mollusca 24, 31, 32, 33, 38, 40, 41, 43, 44, 45, 54, 55, 56,<br>57, 58, 59, 60, 61, 68, 72, 78, 80, 84, 85, 88, 90,<br>91, 94, 95, 96, 105, 107, 108, 109, 110, 111, 112,<br>118, 120, 133, 135, 136, 137, 138, 142, 144, 148,<br>151, 153, 154, 155, 176, 225, 255, 260 |                                 | concentrica.....                     | <b>24</b> , 44                                                   |
| vera.....                                                                                                                                                                                                                                                                | 132, 133, 164                   | congeneris.....                      | <b>196</b>                                                       |
| Molluscoidæ.....                                                                                                                                                                                                                                                         | 133, 165, 260                   | ' (Gervillia) perplana.....          | <b>259</b>                                                       |
| Monoceras sulcatum.....                                                                                                                                                                                                                                                  | 222                             | meliniformis.....                    | <b>41</b> , 45                                                   |
| Monomyaria.....                                                                                                                                                                                                                                                          | 97, 105, 132, 133, 263, 266     | (Myltelus) perattenuata.....         | <b>19</b> , 20                                                   |
| Monopleura.....                                                                                                                                                                                                                                                          | 176                             | nemesis.....                         | <b>196</b>                                                       |
| marcida.....                                                                                                                                                                                                                                                             | <b>176</b>                      | nessus.....                          | <b>196</b>                                                       |
| pinguiscula.....                                                                                                                                                                                                                                                         | <b>176</b>                      | perattenuata.....                    | 32, 51, 86                                                       |
| Monopteria.....                                                                                                                                                                                                                                                          | <b>41</b> , 45, 127, 132, 178   | permiana.....                        | 32, 151, 236                                                     |
| gibbosa.....                                                                                                                                                                                                                                                             | 178                             | recta.....                           | 258                                                              |
| marian.....                                                                                                                                                                                                                                                              | <b>127</b> , 132                | recurvirostra.....                   | <b>24</b> , 45                                                   |
| Monotis.....                                                                                                                                                                                                                                                             | 86, 258                         | recurvirostris.....                  | 178                                                              |
| — ?.....                                                                                                                                                                                                                                                                 | 258                             | squamosa.....                        | 20, 258                                                          |
| ? gregaria.....                                                                                                                                                                                                                                                          | <b>64</b> , 86                  | st. ludovica.....                    | 84                                                               |
| hawni.....                                                                                                                                                                                                                                                               | <b>19</b> , 20, 51              | subquadrata.....                     | 20, 32, 51, 73, 178, 274                                         |
| speluncaria.....                                                                                                                                                                                                                                                         | 258                             | swallovi.....                        | 45, 51, 73, 132, 178                                             |
| Monticulipora.....                                                                                                                                                                                                                                                       | 129, 135, 155                   | Myrophoria.....                      | 111, 133                                                         |
| dali.....                                                                                                                                                                                                                                                                | 129                             | ambilineata.....                     | <b>133</b>                                                       |
| frondosa.....                                                                                                                                                                                                                                                            | 155                             | lineata.....                         | 111                                                              |
| monticula.....                                                                                                                                                                                                                                                           | <b>138</b>                      | Myomia.....                          | <b>224</b>                                                       |
| Mortonia (Periarclius) crustuloides.....                                                                                                                                                                                                                                 | 222                             | elongata.....                        | <b>224</b>                                                       |
| lyelli.....                                                                                                                                                                                                                                                              | 220                             | valida.....                          | <b>224</b>                                                       |
| pileus-sinensis.....                                                                                                                                                                                                                                                     | 222                             | Myriapoda.....                       | 37, 46, 61                                                       |
| tumida.....                                                                                                                                                                                                                                                              | 222                             | Myrtea.....                          | 99                                                               |
| Mortoniceræ.....                                                                                                                                                                                                                                                         | <b>104</b>                      | Mytelus subarcuatus.....             | <b>16</b>                                                        |
| shoshonense.....                                                                                                                                                                                                                                                         | 104                             | Mytilarca.....                       | 194                                                              |
| ? vernilionense.....                                                                                                                                                                                                                                                     | 104                             | chemungensis.....                    | 194                                                              |
| Mulinia.....                                                                                                                                                                                                                                                             | 215, 216                        | dubia.....                           | <b>194</b>                                                       |
| densata.....                                                                                                                                                                                                                                                             | <b>215</b> , 216                | (Plethomytilus) oviformis.....       | 194                                                              |
| Multicostata.....                                                                                                                                                                                                                                                        | 34                              | Mytilidæ.....                        | 30, 33, 98, 110, 111, 260, 262, 267, 270                         |
| Marchisonia.....                                                                                                                                                                                                                                                         | 55, 74, 117, 147, 151, 164, 191 | Mytiloides.....                      | 97                                                               |
| bicincta.....                                                                                                                                                                                                                                                            | 55                              | Mytilus.....                         | 30, 98, 116, 164, 211, 213, 217, 260, 262, 267                   |
| copei.....                                                                                                                                                                                                                                                               | <b>151</b>                      | attenuatus.....                      | <b>15</b>                                                        |
| inornata.....                                                                                                                                                                                                                                                            | <b>40</b> , 87                  | concavus ?.....                      | 51                                                               |
| major.....                                                                                                                                                                                                                                                               | <b>232</b>                      | engelmanni.....                      | <b>274</b>                                                       |
| milleri.....                                                                                                                                                                                                                                                             | 191                             | febristriatus.....                   | <b>116</b>                                                       |
| nebrascensis.....                                                                                                                                                                                                                                                        | 74                              | humerus.....                         | <b>211</b> , 213                                                 |
| obsoleto.....                                                                                                                                                                                                                                                            | <b>67</b>                       | inezensis.....                       | <b>217</b>                                                       |
| ? proluxa.....                                                                                                                                                                                                                                                           | <b>117</b>                      | inflatus.....                        | 50                                                               |
| subtaniata.....                                                                                                                                                                                                                                                          | 51                              | meekii.....                          | <b>256</b>                                                       |
| terebra.....                                                                                                                                                                                                                                                             | <b>147</b> , 164                | multistriatus.....                   | <b>30</b>                                                        |
| Muricidæ.....                                                                                                                                                                                                                                                            | 103                             | occidentalis.....                    | <b>116</b>                                                       |
| Mya.....                                                                                                                                                                                                                                                                 | 215, 216                        | oblivius.....                        | <b>267</b>                                                       |
| abrupta.....                                                                                                                                                                                                                                                             | <b>205</b>                      | (Orthonota) ventricosa.....          | <b>116</b>                                                       |
| montereyana.....                                                                                                                                                                                                                                                         | <b>215</b> , 216                | pedroanus.....                       | <b>211</b> , 213                                                 |
| ? subsinuata.....                                                                                                                                                                                                                                                        | <b>216</b>                      | pertenus.....                        | <b>18</b>                                                        |
| tellinoides.....                                                                                                                                                                                                                                                         | <b>231</b>                      | subarcuatus.....                     | 98                                                               |
| Myacites.....                                                                                                                                                                                                                                                            | 31, 34, 111, 164                | whitci.....                          | 164, <b>260</b> , 262                                            |
| depressus.....                                                                                                                                                                                                                                                           | <b>31</b>                       |                                      |                                                                  |
| inconspicuus.....                                                                                                                                                                                                                                                        | <b>311</b>                      |                                      |                                                                  |
| nebrascensis.....                                                                                                                                                                                                                                                        | <b>21</b> , 34                  |                                      |                                                                  |
| (Pleuromya) subcompressa.....                                                                                                                                                                                                                                            | 111, 179                        |                                      |                                                                  |

N.

|                           |     |
|---------------------------|-----|
| Nai'a.....                | 105 |
| Naiadites carbonaria..... | 167 |
| elongata.....             | 167 |
| levis.....                | 167 |
| Naidæ.....                | 105 |



|                                    | Page.                                                                                         |
|------------------------------------|-----------------------------------------------------------------------------------------------|
| Narica .....                       | 212, 214                                                                                      |
| diegoana .....                     | 50, <b>212</b> , 214, 221                                                                     |
| Nassa .....                        | 212, 214                                                                                      |
| intastriata .....                  | 212                                                                                           |
| interstriata .....                 | 214                                                                                           |
| pedroana .....                     | <b>212</b> , 214                                                                              |
| Natica .....                       | 208, 210, 211, 212, 213, 214,<br>217, 219, 223, 226, 236                                      |
| acutispira .....                   | 48                                                                                            |
| alabamiensis .....                 | 221                                                                                           |
| alveata .....                      | <b>211</b> , 213, 221                                                                         |
| ambigua .....                      | <b>14</b> , 48                                                                                |
| collina .....                      | <b>219</b>                                                                                    |
| concinna .....                     | <b>13</b>                                                                                     |
| erecta .....                       | 221                                                                                           |
| geniculata .....                   | <b>212</b> , 214                                                                              |
| gibbosa .....                      | 211, 213, 221                                                                                 |
| inezana .....                      | 50, 217                                                                                       |
| indurata .....                     | <b>208</b>                                                                                    |
| ?lelia .....                       | <b>236</b>                                                                                    |
| limula .....                       | 219                                                                                           |
| minima .....                       | 221                                                                                           |
| moreauensis .....                  | <b>14</b>                                                                                     |
| obliquata .....                    | <b>13</b>                                                                                     |
| occidentalis .....                 | <b>14</b> , 231                                                                               |
| ocoyana .....                      | <b>212</b> , 214                                                                              |
| œtites ? .....                     | 211, 213                                                                                      |
| orientalis .....                   | <b>210</b>                                                                                    |
| paludinaeformis .....              | <b>13</b>                                                                                     |
| saxea .....                        | <b>206</b>                                                                                    |
| ?scalaris .....                    | <b>210</b>                                                                                    |
| suberassa .....                    | <b>15</b>                                                                                     |
| syriaca .....                      | 208                                                                                           |
| texana .....                       | <b>219</b>                                                                                    |
| tuomeyana .....                    | <b>16</b> , 48                                                                                |
| Naticidæ .....                     | 102, 111, 132, 264                                                                            |
| Naticina obliqua .....             | 221                                                                                           |
| Naticopsis .....                   | 25, 27, 46, 80, 86, 132, 136,<br>152, 164, 165, 179                                           |
| aequistriata .....                 | <b>80</b>                                                                                     |
| altonensis .....                   | 86, 152                                                                                       |
| hollidayi .....                    | <b>25</b>                                                                                     |
| ? (Idonearca) humilis .....        | 80                                                                                            |
| levis .....                        | <b>67</b> , 80                                                                                |
| littonana var. genevievensis ..... | 40                                                                                            |
| monilifera .....                   | 152, <b>165</b>                                                                               |
| nana .....                         | 46, 132, 179                                                                                  |
| nodosus .....                      | <b>25</b>                                                                                     |
| (Platystoma) acquistriata .....    | <b>67</b>                                                                                     |
| remex .....                        | <b>136</b> , 164                                                                              |
| subovatus .....                    | 86                                                                                            |
| (Trachydomia) nodosa .....         | 46                                                                                            |
| var. hollidayi .....               | 46                                                                                            |
| ventrica .....                     | 86                                                                                            |
| wheeleri .....                     | 86, 179                                                                                       |
| var. ....                          | 152                                                                                           |
| Nantilidæ .....                    | 33, 63, 104, 121, 132, 265                                                                    |
| Nautilina .....                    | 106                                                                                           |
| Nautilus .....                     | 25, 27, 29, 33, 39, 42, 45, 46, 65, 74, 84, 92, 93,<br>104, 132, 144, 165, 179, 245, 258, 265 |
| — (1) .....                        | 258                                                                                           |
| angustatus .....                   | 50, <b>206</b>                                                                                |
| campbelli .....                    | <b>27</b> , 93                                                                                |
| chesterensis .....                 | <b>25</b> , 45                                                                                |

|                                    | Page.                   |
|------------------------------------|-------------------------|
| Nautilus (Cryptoceras) capax ..... | <b>39</b> , 92          |
| ? leidyi .....                     | <b>39</b>               |
| rockfordensis .....                | <b>40</b>               |
| springeri .....                    | <b>121</b>              |
| danvillensis .....                 | <b>144</b> , 165        |
| dekeyi .....                       | 104                     |
| var. montanaensis .....            | 104, 265                |
| digonus .....                      | 42                      |
| (Discites) disciformis .....       | <b>39</b> , 84          |
| ornatus var. amplus .....          | 39                      |
| (Discus) digonus .....             | <b>25</b>               |
| planorbiformis .....               | <b>25</b>               |
| sangamonensis .....                | <b>25</b>               |
| trisulcatus .....                  | <b>25</b>               |
| divisus .....                      | 121                     |
| elegans .....                      | 104                     |
| var. nebrascensis .....            | 29                      |
| (Endolobus) peramplius .....       | <b>39</b>               |
| spectabilis .....                  | 45                      |
| eccentricus .....                  | <b>19</b> , 20, 33      |
| forbesianus .....                  | 179                     |
| globatus .....                     | 45                      |
| lamarekii .....                    | 222                     |
| lasallensis .....                  | <b>39</b> , 87          |
| missouriensis .....                | 179                     |
| occidentalis .....                 | 74                      |
| planorbiformis .....               | 46                      |
| ponderosus .....                   | 74                      |
| sangamonensis .....                | 46                      |
| (Solenocheilus) collectus .....    | <b>65</b> , 84          |
| leideyi .....                      | 84                      |
| spectabilis .....                  | <b>25</b>               |
| subglobosus .....                  | <b>25</b>               |
| (Temnocheilus) coxanus .....       | 84                      |
| latus .....                        | 87                      |
| niotensis .....                    | <b>39</b> , 84          |
| winslowi .....                     | 87                      |
| (Temnochilus) coxanus .....        | <b>65</b>               |
| latus .....                        | <b>65</b>               |
| winslowi .....                     | <b>65</b>               |
| tenui-planatus .....               | <b>227</b>              |
| (Trematodiscus) sulcatus .....     | 40                      |
| trisulcatus .....                  | 42                      |
| winslowi .....                     | 179                     |
| Navicula bacillum .....            | 229                     |
| scalprum .....                     | 229                     |
| semen .....                        | 229                     |
| siticula .....                     | 229                     |
| sigma .....                        | 229                     |
| Neæra .....                        | 101, 260, 263, 264, 272 |
| aequivalvis .....                  | <b>272</b>              |
| fibrosa .....                      | 48                      |
| longirostra .....                  | <b>260</b> , 263        |
| moreauensis .....                  | 101, 264                |
| ventricosa .....                   | 101                     |
| Neithea .....                      | 215, 218, 266           |
| occidentalis .....                 | <b>215</b> , 218        |
| quinquecostata .....               | 266                     |
| texana .....                       | 218                     |
| Nematocrinus .....                 | 40                      |
| Nemoæra .....                      | 267                     |
| cretacea .....                     | 267                     |
| Nemocardium .....                  | 99                      |
| Nemodon .....                      | 98, 267                 |
| angulatum .....                    | 267                     |



|                                                                    | Page.              |                                                                    | Page.            |
|--------------------------------------------------------------------|--------------------|--------------------------------------------------------------------|------------------|
| <i>Nemodon brevifrons</i> .....                                    | 267                | <i>Nucula</i> ..73, 86, 92, 98, 116, 147, 155, 163, 178, 194, 197, |                  |
| <i>enfantensis</i> .....                                           | 267                | 207, 208, 209, 213, 224, 247, 263, 267, 271                        |                  |
| <i>sulcatinus</i> .....                                            | 98                 | — ? .....                                                          | 194              |
| <i>Nemophora floridana</i> .....                                   | 220                | <i>abrupta</i> , Conrad .....                                      | 209              |
| <i>Neptuna impressa</i> .....                                      | 49                 | Dana .....                                                         | 224, 225         |
| <i>Neptunella</i> .....                                            | 103                | ( <i>Acila</i> ) <i>conradi</i> .....                              | 50               |
| <i>Nerinea</i> .....                                               | 208, 209, 210, 219 | ? <i>anodontoides</i> .....                                        | 69               |
| — ? .....                                                          | 210                | <i>bellastriata</i> .....                                          | 159              |
| <i>abbreviata</i> .....                                            | 210                | <i>beyrichi</i> .....                                              | 51, 73, 86       |
| <i>cochleiformis</i> .....                                         | 210                | <i>cancellata</i> .....                                            | 15, 98           |
| <i>crotaea</i> .....                                               | 209                | <i>circo</i> .....                                                 | 271              |
| <i>orientalis</i> .....                                            | 210                | <i>concinna</i> .....                                              | 225              |
| <i>rhamdunensis</i> .....                                          | 208                | <i>crebrilineata</i> .....                                         | 208              |
| <i>schottii</i> .....                                              | 219                | <i>cultelliformis</i> .....                                        | 220              |
| <i>syriaca</i> .....                                               | 208, 210           | <i>decisa</i> .....                                                | 213              |
| <i>Nerita</i> .....                                                | 180                | <i>divaricata</i> .....                                            | 50, 206          |
| — ? .....                                                          | 180                | <i>equilateralis</i> .....                                         | 15               |
| ( <i>Nereis</i> ) <i>densata</i> .....                             | 48                 | <i>evansi</i> .....                                                | 15               |
| <i>Neritella</i> .....                                             | 28, 34             | <i>gabbana</i> .....                                               | 267              |
| <i>nebrascensis</i> .....                                          | 28, 34, 49         | <i>glendonensis</i> .....                                          | 225              |
| ( <i>Nereis</i> ) <i>densata</i> .....                             | 48                 | <i>haydeni</i> .....                                               | 159              |
| <i>Neritida</i> .....                                              | 34, 133, 134, 180  | <i>impressa</i> .....                                              | 206, 231         |
| <i>Neritina</i> ..127, 133, 134, 136, 137, 141, 143, 158, 161, 166 |                    | <i>insularis</i> .....                                             | 197              |
| <i>bannisteri</i> .....                                            | 158, 167           | <i>iowensis</i> .....                                              | 116              |
| <i>bruneri</i> .....                                               | 166, 169           | <i>kazanensis</i> .....                                            | 51               |
| ( <i>Dostia</i> ?) <i>bellatula</i> .....                          | 76                 | <i>levatiforme</i> .....                                           | 197              |
| <i>carditoides</i> .....                                           | 76                 | <i>longifrons</i> .....                                            | 267              |
| ( <i>patelliformis</i> ) .....                                     | 76                 | <i>magna</i> .....                                                 | 220              |
| <i>incompta</i> .....                                              | 143                | <i>media</i> .....                                                 | 220              |
| <i>uaticiformis</i> .....                                          | 141, 161, 168      | <i>minuta</i> .....                                                | 247              |
| <i>nebrascensis</i> .....                                          | 49, 167            | <i>monmouthensis</i> .....                                         | 267              |
| ( <i>Neritella</i> ) <i>bannisteri</i> .....                       | 76                 | <i>myiformis</i> .....                                             | 207              |
| <i>pisum</i> .....                                                 | 76                 | <i>obsoletastriata</i> .....                                       | 16, 98           |
| <i>phaseolaris</i> .....                                           | 127, 133           | ? <i>obtenta</i> .....                                             | 209              |
| <i>pisiformis</i> .....                                            | 76, 158            | <i>ovula</i> .....                                                 | 220              |
| <i>pisum</i> .....                                                 | 143                | <i>parallela</i> .....                                             | 207              |
| <i>powelli</i> .....                                               | 136                | <i>parva</i> .....                                                 | 86, 220          |
| ( <i>Velatella</i> ) <i>baptista</i> .....                         | 141, 161, 169      | <i>pectuncularis</i> .....                                         | 220              |
| <i>bellatula</i> .....                                             | 158, 167           | <i>penita</i> .....                                                | 49               |
| <i>carditoides</i> .....                                           | 134, 158, 167      | <i>percerassa</i> .....                                            | 267              |
| <i>patelliformis</i> .....                                         | 143                | <i>perdita</i> .....                                               | 208              |
| <i>var. webe-</i>                                                  |                    | <i>perequalis</i> .....                                            | 267              |
| <i>rensis</i> ..                                                   | 143                | <i>perobliqua</i> .....                                            | 207              |
| <i>volvilineata</i> .....                                          | 137, 161, 169      | <i>perovata</i> .....                                              | 208              |
| <i>Neritopsis</i> ? <i>tuomeyana</i> .....                         | 48                 | <i>perumbonata</i> .....                                           | 147, 163         |
| <i>Neuropteris</i> .....                                           | 149, 246           | <i>plana</i> .....                                                 | 220              |
| <i>angulata</i> .....                                              | 246                | <i>planimarginata</i> .....                                        | 98, 263          |
| <i>hirsuta</i> .....                                               | 149                | <i>planomarginata</i> .....                                        | 15               |
| <i>rarinervis</i> .....                                            | 149                | <i>plicata</i> .....                                               | 220              |
| <i>Neverita gibbosa</i> .....                                      | 221                | <i>pulcherrima</i> .....                                           | 220              |
| <i>Nipterocrinus</i> .....                                         | 54, 82             | <i>rescuensis</i> .....                                            | 194              |
| <i>arboreus</i> .....                                              | 82                 | <i>scitula</i> .....                                               | 15               |
| <i>wachsmuthi</i> .....                                            | 54, 82             | <i>semen</i> .....                                                 | 220              |
| <i>Nodosaria</i> .....                                             | 219                | <i>slackiana</i> .....                                             | 267              |
| <i>texana</i> .....                                                | 219                | <i>submucronata</i> .....                                          | 207              |
| <i>Notogerrathia</i> .....                                         | 226                | <i>subnasuta</i> .....                                             | 13               |
| <i>clongata</i> .....                                              | 226                | <i>subplana</i> .....                                              | 15, 98           |
| <i>media</i> .....                                                 | 226                | <i>syriaca</i> .....                                               | 207              |
| <i>spatulata</i> .....                                             | 226                | <i>traskana</i> .....                                              | 17, 92           |
| <i>Notocoeli</i> .....                                             | 35                 | <i>ventricosa</i> .....                                            | 13, 73, 155, 178 |
| <i>Notomya</i> .....                                               | 224                | <i>Nuculana</i> ..44, 73, 87, 98, 140, 147, 160, 163,              |                  |
| <i>Notosiphites</i> .....                                          | 35                 | 178, 211, 260, 263, 267, 271                                       |                  |
| <i>Nucleospira</i> .....                                           | 193                | <i>albaria</i> .....                                               | 271              |
| <i>barrisii</i> .....                                              | 116                | <i>bellistriata</i> .....                                          | 178              |
| <i>concinni</i> .....                                              | 193                | <i>var. attenuata</i> .....                                        | 73               |

|                                            | Page.                           |                                              | Page.                  |
|--------------------------------------------|---------------------------------|----------------------------------------------|------------------------|
| <i>Nuculana bisulcata</i> .....            | 47, 98, 263                     | ? <i>Odontobasis formosa</i> .....           | <b>141</b> , 162       |
| <i>compressifrons</i> .....                | 268                             | <i>Odontocephalus</i> .....                  | 58                     |
| <i>compssa</i> .....                       | 220                             | <i>Odontopteris</i> .....                    | 149                    |
| <i>cultelliformis</i> .....                | 220                             | <i>subcuneata</i> .....                      | 149                    |
| ? <i>curta</i> .....                       | 44                              | <i>Ogygia</i> .....                          | 190, 234               |
| <i>decisa</i> .....                        | <b>211</b>                      | <i>parabola</i> .....                        | <b>234</b>             |
| ? <i>equilateralis</i> .....               | 98                              | ? <i>problematica</i> .....                  | <b>190</b>             |
| <i>inclara</i> .....                       | <b>140</b> , 160                | <i>producta</i> .....                        | <b>234</b>             |
| <i>longifrons</i> .....                    | 47                              | ? <i>spinosa</i> .....                       | <b>190</b>             |
| <i>magna</i> .....                         | 220                             | <i>Olenellus</i> .....                       | 126, 129, 189          |
| <i>media</i> .....                         | 220                             | <i>gilberti</i> .....                        | 126, 129, 189          |
| <i>obesa</i> .....                         | <b>147</b> , 163                | <i>howelli</i> .....                         | 129, 189               |
| <i>oregona</i> .....                       | 49, 220                         | <i>uddingsi</i> .....                        | <b>189</b>             |
| <i>ovula</i> .....                         | 220                             | <i>powelli</i> .....                         | 126                    |
| <i>parva</i> .....                         | 220                             | <i>Olenus (Olenellus) gilberti</i> .....     | <b>88</b>              |
| <i>penita</i> .....                        | 49                              | <i>howelli</i> .....                         | <b>88</b>              |
| <i>pinnaeformis</i> .....                  | 47, 268                         | <i>Oligoporus</i> .....                      | <b>25</b> , 43, 54, 83 |
| <i>plana</i> .....                         | 220                             | <i>coreyi</i> .....                          | <b>64</b>              |
| <i>plicata</i> .....                       | 220                             | <i>danae</i> .....                           | 43, 60                 |
| <i>protecta</i> .....                      | 47, 267                         | <i>nobilis</i> .....                         | <b>54</b> , 83         |
| <i>pulcherrima</i> .....                   | 220                             | <i>Oligoptych</i> .....                      | 101                    |
| <i>semen</i> .....                         | 220                             | <i>Oliva ancillariaeformis</i> .....         | 50                     |
| <i>slackiana</i> .....                     | 47                              | <i>phillipsii</i> .....                      | <b>222</b>             |
| <i>subangulata</i> .....                   | 47                              | <i>Olivella ancillariformis</i> .....        | 50                     |
| <i>subequilatera</i> .....                 | <b>260</b> , 263                | <i>Olivula</i> ? <i>plicata</i> .....        | <b>222</b>             |
| <i>subnasuta</i> .....                     | 98                              | <i>punctulifera</i> .....                    | <b>222</b>             |
| <i>willamettensis</i> .....                | 49                              | <i>Ollacrinus</i> .....                      | 42                     |
| <i>Nuculanidae</i> .....                   | 32, 260                         | <i>Omala</i> .....                           | 100                    |
| <i>Nuculaninae</i> .....                   | 32, 33                          | <i>Omphiscola</i> .....                      | 106                    |
| <i>Nucularia</i> .....                     | 268, 271                        | <i>Onychaster</i> .....                      | <b>61</b> , 63, 83     |
| <i>papyria</i> .....                       | 268                             | <i>barrisi</i> .....                         | 83                     |
| <i>secunda</i> .....                       | <b>271</b>                      | <i>flexilis</i> .....                        | <b>61</b>              |
| <i>Nuculidae</i> .....                     | 98, 267, 271                    | <i>flexilis</i> .....                        | 83                     |
| <i>Nuculites</i> .....                     | 235                             | <i>Onychocrinus</i> .....                    | 40, 43, 60, 84, 154    |
| <i>triangulus</i> .....                    | <b>235</b>                      | <i>diversus</i> .....                        | <b>40</b> , 60         |
| <i>Nullipora</i> ? <i>obtexta</i> .....    | <b>119</b>                      | <i>exculptus</i> .....                       | 83, 154                |
| <i>Nummulites</i> .....                    | 209                             | <i>monroensis</i> .....                      | 43                     |
| <i>arbiensis</i> .....                     | <b>209</b>                      | <i>norwoodi</i> .....                        | 43                     |
| <i>floridana</i> .....                     | 220                             | <i>ramulosus</i> .....                       | 154                    |
| <i>mantelli</i> .....                      | 222                             | <i>whitfieldi</i> .....                      | 84                     |
| <i>Nyassa</i> .....                        | 194                             | <i>Operculatum planulatum</i> .....          | <b>222</b>             |
| <i>parva</i> .....                         | <b>194</b>                      | <i>Omphalotrochus</i> .....                  | 30                     |
| O.                                         |                                 | <i>Ophileta</i> .....                        | 55, 108                |
| <i>Obeliscus melanellus</i> .....          | 221                             | <i>complanata</i> var. <i>nana</i> .....     | 108                    |
| <i>pygmaeus</i> .....                      | 221                             | <i>owenana</i> .....                         | <b>55</b>              |
| <i>striatus</i> .....                      | 221                             | <i>Ophioderma</i> .....                      | 158                    |
| <i>Obolella</i> .....                      | 27, 31, 189, 190, 198, 233, 261 | ? <i>bridgerensis</i> .....                  | 158                    |
| —— ?.....                                  | 198                             | <i>Ophiuroidea</i> .....                     | 78                     |
| ? <i>ambigua</i> .....                     | <b>190</b>                      | <i>Opis</i> .....                            | 208, 209               |
| <i>chromatica</i> .....                    | 199                             | <i>equalis</i> .....                         | <b>209</b>             |
| <i>discoidea</i> .....                     | 189, <b>233</b>                 | <i>undatus</i> .....                         | <b>208</b>             |
| <i>nana</i> .....                          | <b>27</b> , 31, 261             | <i>Orbicula</i> .....                        | 207, 209, 210          |
| <i>polita</i> .....                        | 261                             | ? ——.....                                    | 210                    |
| <i>transversa</i> .....                    | 198                             | <i>lugubris</i> .....                        | 49                     |
| <i>Obolidae</i> .....                      | 261                             | <i>multilineata</i> .....                    | 49                     |
| <i>Obolus</i> .....                        | 56, 259, 261                    | <i>prima</i> .....                           | <b>250</b>             |
| <i>pectenoides</i> .....                   | <b>259</b>                      | <i>subobliqua</i> .....                      | <b>207</b>             |
| ? <i>pectenoides</i> .....                 | 261                             | ? <i>syriaca</i> .....                       | <b>209</b>             |
| ( <i>Trimerella</i> ) <i>conradi</i> ..... | 56                              | <i>Orbiculoidea</i> .....                    | 72, 89                 |
| <i>Obovaria</i> .....                      | 105                             | —— ?.....                                    | 72                     |
| ? <i>Odontobasis</i> .....                 | <b>103</b> , 137, 141, 162      | <i>Orbitolites discoidea</i> .....           | 220                    |
| <i>buccinoidea</i> .....                   | <b>137</b>                      | <i>interstitia</i> .....                     | 220                    |
| <i>buccinoides</i> .....                   | 162                             | ( <i>Orbitoides</i> ) <i>mantelli</i> .....  | <b>222</b>             |
| <i>constricta</i> .....                    | 103                             | <i>Orbitulites</i> ? <i>reticulata</i> ..... | <b>247</b> , 248       |
|                                            |                                 | <i>texanus</i> .....                         | 47                     |

|                                   | Page.                                                                                                                     |                                 | Page.                                                                                                                                                |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orthis.....                       | 29, 30, 57, 58, 62, 72, 78, 85, 109, 116, 129,<br>130, 131, 148, 151, 165, 177, 189, 190, 192,<br>198, 234, 235, 247, 248 | Othoceras blakei.....           | 110                                                                                                                                                  |
| —— ? .....                        | 30, 58, 248                                                                                                               | (Cameroceras) colon .....       | 120                                                                                                                                                  |
| arachnoides .....                 | <b>233</b>                                                                                                                | colon .....                     | <b>126</b>                                                                                                                                           |
| bellula .....                     | 78                                                                                                                        | cribrosum .....                 | 74                                                                                                                                                   |
| biforata var. acutilirata .....   | 148                                                                                                                       | crebristriatum .....            | <b>39, 91</b>                                                                                                                                        |
| lynx.....                         | 130                                                                                                                       | eurekensis .....                | <b>198</b>                                                                                                                                           |
| billingsi .....                   | 198                                                                                                                       | expansum .....                  | <b>25, 27, 44</b>                                                                                                                                    |
| borealis .....                    | 78                                                                                                                        | ?isogramma .....                | <b>67</b>                                                                                                                                            |
| carbonaria .....                  | 72, 85                                                                                                                    | jolietensis .....               | <b>39, 91</b>                                                                                                                                        |
| coloradoensis .....               | <b>66</b>                                                                                                                 | kingii .....                    | <b>109</b>                                                                                                                                           |
| crenistris .....                  | 243                                                                                                                       | marginale .....                 | <b>247</b>                                                                                                                                           |
| cuneata .....                     | <b>250</b>                                                                                                                | medullare .....                 | 91                                                                                                                                                   |
| electra .....                     | 129                                                                                                                       | multicameratum .....            | 191                                                                                                                                                  |
| ella .....                        | 78                                                                                                                        | nobile .....                    | <b>39</b>                                                                                                                                            |
| emacerata .....                   | 78                                                                                                                        | nova mexicana .....             | <b>243</b>                                                                                                                                           |
| eurekensis .....                  | <b>189</b>                                                                                                                | oneidiense .....                | <b>187</b>                                                                                                                                           |
| fissicosta .....                  | 78                                                                                                                        | (Ormoceras) beckii.....         | 55                                                                                                                                                   |
| hamburgensis .....                | <b>190</b>                                                                                                                | ortoni .....                    | <b>68, 79</b>                                                                                                                                        |
| hibrida .....                     | 57                                                                                                                        | randolphensis .....             | 198                                                                                                                                                  |
| impressa .....                    | 192                                                                                                                       | rushensis .....                 | 87, 179                                                                                                                                              |
| insculpta .....                   | 78                                                                                                                        | subbaeculum .....               | <b>39</b>                                                                                                                                            |
| iowensis .....                    | 62, 148                                                                                                                   | undulatum .....                 | <b>247</b>                                                                                                                                           |
| var. furnarius.....               | 58                                                                                                                        | winchellii .....                | <b>39, 91</b>                                                                                                                                        |
| lonensis .....                    | <b>190</b>                                                                                                                | Orthocerata .....               | 191                                                                                                                                                  |
| mcfarlanei .....                  | 58, <b>62</b> , 192                                                                                                       | Orthoceratitidæ .....           | 109, 110                                                                                                                                             |
| micheeli .....                    | 109                                                                                                                       | Orthonema .....                 | <b>27, 46, 74, 80, 86</b>                                                                                                                            |
| occidentalis .....                | 78, 130, 148                                                                                                              | conica .....                    | <b>40, 86</b>                                                                                                                                        |
| pecosii .....                     | 131, 177, <b>243</b>                                                                                                      | newberryi .....                 | <b>67, 80</b>                                                                                                                                        |
| perveta .....                     | 190                                                                                                                       | salteri .....                   | 46                                                                                                                                                   |
| plicatella .....                  | 78, 130                                                                                                                   | subtæniata .....                | 51, 74                                                                                                                                               |
| (Platystrophia) acutilirata ..... | 78                                                                                                                        | Orthonota .....                 | 116                                                                                                                                                  |
| biforata .....                    | 78                                                                                                                        | Orthonychia .....               | 40                                                                                                                                                   |
| dentata .....                     | 78                                                                                                                        | Ostraca .....                   | 227                                                                                                                                                  |
| laticosta .....                   | 78                                                                                                                        | Ostracoda .....                 | 136                                                                                                                                                  |
| lynx .....                        | 78                                                                                                                        | Ostrea.....                     | 28, 33, 93, 94, 105, 111, 133, 136, 142,<br>151, 158, 160, 172, 173, 205, 206, 209,<br>211, 213, 216, 217, 219, 233, 236, 237,<br>262, 266, 270, 271 |
| pogonipensis .....                | <b>234</b>                                                                                                                | —— ? .....                      | 97                                                                                                                                                   |
| resupinata ? .....                | 235                                                                                                                       | alabamensis .....               | 237                                                                                                                                                  |
| resupinoides .....                | 151                                                                                                                       | (Alectryonia) bellaplicata..... | 142                                                                                                                                                  |
| retrorsa .....                    | 78                                                                                                                        | blackii.....                    | <b>151, 158</b>                                                                                                                                      |
| subelliptica .....                | <b>116</b>                                                                                                                | larva .....                     | 173                                                                                                                                                  |
| subcarinata .....                 | 57                                                                                                                        | linguafelis .....               | <b>271</b>                                                                                                                                           |
| subquadrata .....                 | 78, 148                                                                                                                   | procumbens .....                | 172                                                                                                                                                  |
| testudinaria .....                | 130, 190, 248 ?                                                                                                           | sannionis .....                 | <b>136, 142</b>                                                                                                                                      |
| thiomei .....                     | 116, 165                                                                                                                  | americana .....                 | 172                                                                                                                                                  |
| tricenaria .....                  | 190                                                                                                                       | anomieformis .....              | 172                                                                                                                                                  |
| tulliensis .....                  | 192                                                                                                                       | anomiooides .....               | <b>76, 158, 172</b>                                                                                                                                  |
| umbraculum ? .....                | 232                                                                                                                       | apressa .....                   | 172                                                                                                                                                  |
| Orthisina .....                   | 257                                                                                                                       | atwoodi .....                   | 237, 238                                                                                                                                             |
| —— ? .....                        | 257                                                                                                                       | barrandei .....                 | 172                                                                                                                                                  |
| crassa.....                       | <b>19, 20</b>                                                                                                             | bella .....                     | 172, <b>219</b>                                                                                                                                      |
| missouriana .....                 | 52                                                                                                                        | bellarugosa .....               | 172                                                                                                                                                  |
| missouriensis .....               | 20                                                                                                                        | belliplicata .....              | 172                                                                                                                                                  |
| shumardiana .....                 | 20                                                                                                                        | blackii .....                   | 172                                                                                                                                                  |
| umbraculum .....                  | 20, 274                                                                                                                   | breweri .....                   | 172                                                                                                                                                  |
| Orthoceras .....                  | 25, 27, 36, 39, 44, 55, 74, 79, 87, 91, 94, 109,<br>110, 126, 129, 154, 179, 187, 195, 198, 248                           | borealis .....                  | 237                                                                                                                                                  |
| —— ? .....                        | 191, 198, 258                                                                                                             | bryani .....                    | 172                                                                                                                                                  |
| anellum .....                     | 55                                                                                                                        | bourgeoisii .....               | 238                                                                                                                                                  |
| angulatum .....                   | 91                                                                                                                        | boussingaultii .....            | 206                                                                                                                                                  |
| annulato-costatum .....           | 44                                                                                                                        | carinata .....                  | 172, 219                                                                                                                                             |
| annulatum .....                   | 154                                                                                                                       | carolinensis .....              | 172, 237                                                                                                                                             |
| annulocostatum .....              | <b>27</b>                                                                                                                 | compressirostra .....           | 237                                                                                                                                                  |
| baeculum .....                    | <b>22, 91</b>                                                                                                             | conchaphila .....               | 238                                                                                                                                                  |

|                                                | Page.                     |
|------------------------------------------------|---------------------------|
| <i>Ostrea confragosa</i> .....                 | 172                       |
| <i>congesta</i> .....                          | 97, 172, 233, 273, 274    |
| <i>contracta</i> .....                         | <b>215</b> , 219, 237     |
| <i>convexa</i> .....                           | 172                       |
| <i>cortex</i> .....                            | 133, 172, <b>219</b>      |
| <i>corticosa</i> .....                         | <b>209</b>                |
| <i>crenulata</i> .....                         | 172                       |
| <i>crenulimarginata</i> .....                  | 172, 266                  |
| <i>cretacea</i> .....                          | 172, 237                  |
| <i>denticulifera</i> .....                     | 172, 266                  |
| <i>disparilis</i> .....                        | 238                       |
| <i>diluviana</i> .....                         | 172                       |
| <i>divaricata</i> .....                        | 237                       |
| <i>elegantula</i> .....                        | 172                       |
| <i>engelmanni</i> .....                        | <b>22</b> , 95, 172       |
| <i>erversa</i> .....                           | 220, 237                  |
| <i>exogyrella</i> .....                        | 172                       |
| <i>falcata</i> .....                           | 172                       |
| <i>falciformis</i> .....                       | 237                       |
| <i>franklini</i> .....                         | 172                       |
| <i>fundata</i> .....                           | 238                       |
| <i>gabbana</i> .....                           | <b>28</b> , 172           |
| <i>gallus</i> .....                            | 238                       |
| <i>georgiana</i> .....                         | 237                       |
| <i>glabra</i> .....                            | <b>18</b> , 160, 168, 173 |
| <i>glauconoides</i> .....                      | <b>271</b>                |
| <i>glendiformis</i> .....                      | <b>270</b>                |
| ( <i>Gryphæa</i> ?) <i>patina</i> .....        | 97                        |
| <i>uniformis</i> .....                         | <b>93</b>                 |
| ( <i>Gryphæostrea</i> ?) <i>subulata</i> ..... | 97                        |
| <i>heermanni</i> .....                         | 212, 213, 238             |
| <i>idriaensis</i> .....                        | 71, 173                   |
| <i>inornata</i> .....                          | <b>21</b> , 97, 173       |
| <i>insecuta</i> .....                          | <b>136</b>                |
| <i>larva</i> .....                             | 266                       |
| <i>lateralis</i> .....                         | 173                       |
| <i>linguloides</i> .....                       | <b>206</b>                |
| <i>littlei</i> .....                           | 173                       |
| <i>lugubris</i> .....                          | 93, 173, <b>219</b>       |
| <i>lurida</i> .....                            | 238                       |
| <i>lyoni</i> .....                             | 173                       |
| <i>malleiformis</i> .....                      | 173                       |
| <i>marshii</i> .....                           | 241, 242, 243             |
| <i>mesenterica</i> .....                       | 173                       |
| <i>mortoni</i> .....                           | 173, 237                  |
| <i>multilirata</i> .....                       | 173, <b>219</b>           |
| <i>nasuta</i> .....                            | 173                       |
| <i>obtus</i> .....                             | 209                       |
| <i>orientalis</i> .....                        | 209                       |
| <i>owenana</i> .....                           | 173                       |
| <i>panda</i> .....                             | 173, 266                  |
| <i>pandæformis</i> .....                       | 173                       |
| <i>panzana</i> .....                           | <b>217</b> , 238          |
| <i>patercula</i> .....                         | 172                       |
| <i>patina</i> .....                            | <b>16</b> , 173           |
| <i>peculiaris</i> .....                        | 173                       |
| <i>pellucida</i> .....                         | 97, 173                   |
| <i>percrassa</i> .....                         | 238                       |
| <i>planovata</i> .....                         | 173                       |
| <i>plumosa</i> .....                           | 173, 266                  |
| <i>prudentia</i> .....                         | <b>133</b> , 173          |
| <i>quadruplicata</i> .....                     | 142, 173                  |
| <i>robusta</i> .....                           | 173, <b>219</b>           |
| <i>sannionis</i> .....                         | 173                       |
| <i>scapha</i> .....                            | 206                       |

|                                           | Page.                                         |
|-------------------------------------------|-----------------------------------------------|
| <i>Ostrea sculpturata</i> .....           | 238                                           |
| <i>sellaformis</i> .....                  | <b>205</b> , 237                              |
| <i>soleniscus</i> .....                   | <b>66</b> , 76, 158, 173                      |
| <i>strigilecula</i> .....                 | <b>133</b> , 172, 262                         |
| <i>subalata</i> .....                     | 173                                           |
| <i>subfalcata</i> .....                   | 238                                           |
| <i>subjecta</i> .....                     | <b>217</b> , 238                              |
| <i>subovata</i> .....                     | 173, <b>255</b>                               |
| <i>subspatulata</i> .....                 | 173, 219, 266                                 |
| <i>subtrigonalis</i> .....                | 105, 168, 173, <b>256</b>                     |
| <i>syriaca</i> .....                      | <b>206</b>                                    |
| <i>tayloriana</i> .....                   | 238                                           |
| <i>tecticostata</i> .....                 | 173, 266                                      |
| <i>titian</i> .....                       | 216, 238                                      |
| <i>thirsa</i> .....                       | 237                                           |
| <i>toroso</i> .....                       | 173                                           |
| <i>translucida</i> .....                  | <b>18</b> , 173                               |
| <i>trigonalis</i> .....                   | 237                                           |
| <i>tuomeyi</i> .....                      | 173, 237                                      |
| <i>uniformis</i> .....                    | 173                                           |
| <i>veatchii</i> .....                     | 238                                           |
| <i>veleniana</i> .....                    | <b>219</b> , 238                              |
| <i>velicata</i> .....                     | 173, <b>219</b>                               |
| <i>vespertina</i> .....                   | 211, 213, 219, 238                            |
| <i>vicksburgensis</i> .....               | 237                                           |
| <i>virgata</i> .....                      | 206, <b>209</b>                               |
| <i>virginiana</i> .....                   | 238                                           |
| <i>virginica</i> .....                    | 238                                           |
| <i>var. californica</i> .....             | 243                                           |
| <i>vomer</i> .....                        | 173                                           |
| <i>wyomingensis</i> .....                 | 77                                            |
| Ostreidae.....                            | 30, 33, 97, 105, 111, 133, 262, 266, 270, 271 |
| Otozamites <i>macombii</i> .....          | <b>246</b>                                    |
| Ovales.....                               | 34                                            |
| Oxysteles.....                            | 180                                           |
| Oxyrhina <i>mantelli</i> .....            | 246                                           |
| Oxytoma.....                              | <b>33</b> , 49, 97, 142, 151, 153, 158, 262   |
| P.                                        |                                               |
| <i>Pachycardium</i> .....                 | 99, 268                                       |
| <i>burlingtonense</i> .....               | <b>268</b>                                    |
| <i>Pachydesma</i> .....                   | 215, 217                                      |
| <i>inezana</i> .....                      | <b>215</b> , 217                              |
| <i>Pachydomus</i> .....                   | 225                                           |
| <i>antiquatus</i> .....                   | 225                                           |
| <i>cuneatus</i> .....                     | 225                                           |
| <i>levis</i> .....                        | 225                                           |
| <i>ovalis</i> .....                       | 224                                           |
| <i>pusillus</i> .....                     | 224                                           |
| <i>sacculus</i> .....                     | 224                                           |
| <i>Pachymya</i> .....                     | 143, 151, 158                                 |
| <i>austinensis</i> .....                  | 143                                           |
| ? <i>compacta</i> .....                   | 151, 158                                      |
| ? <i>herseyi</i> .....                    | 143                                           |
| ? <i>truncata</i> .....                   | <b>70</b>                                     |
| <i>Pachyodon</i> .....                    | 101, 105                                      |
| <i>Pachyphyllum</i> <i>woodmani</i> ..... | 192                                           |
| <i>Pachytharus</i> .....                  | 99                                            |
| <i>Palaoneilo</i> .....                   | 89                                            |
| <i>bedfordensis</i> .....                 | <b>89</b>                                     |
| <i>Palaecis</i> .....                     | 154                                           |
| <i>cuneatus</i> .....                     | 154                                           |
| <i>cymbia</i> .....                       | 52                                            |
| <i>obtusa</i> .....                       | 52                                            |
| <i>umbonata</i> .....                     | 52                                            |
| <i>Palaecimea</i> .....                   | 198                                           |



|                                       | Page.                       |                                                          | Page.                            |
|---------------------------------------|-----------------------------|----------------------------------------------------------|----------------------------------|
| Palæaster.....                        | 78                          | Paradoxides acadicus.....                                | 198                              |
| dyeri.....                            | <b>69</b> , 78              | eteminicus.....                                          | 198                              |
| granulosus.....                       | 78                          | harlani.....                                             | 199                              |
| incomptus.....                        | <b>70</b> , 78              | lamellatus.....                                          | 198                              |
| jamesii.....                          | 78                          | ? nevadensis.....                                        | <b>65</b> , 108                  |
| shaefferi.....                        | 78                          | Paramithrax.....                                         | 159                              |
| Palæchinidae.....                     | 43                          | ? walkeri.....                                           | <b>159</b>                       |
| Palæchinus.....                       | 23, 43, 83                  | Paranomia.....                                           | 266                              |
| burlingtonensis.....                  | <b>23</b> , 43              | lineata.....                                             | 266                              |
| gracilis.....                         | <b>63</b> , 83              | scabra.....                                              | 266                              |
| Palæocampa.....                       | <b>37</b> , 47, 61          | Parapholas.....                                          | 143, 272                         |
| anthrax.....                          | <b>37</b> , 47              | kneiskerni.....                                          | <b>272</b>                       |
| Palæocaridæ.....                      | 37                          | splenoideus.....                                         | 143                              |
| Palæocaris.....                       | <b>37</b> , 46, 53, 61, 179 | Pasecolus.....                                           | 56                               |
| typus.....                            | <b>37</b> , 46, 61, 179     | dactylioides.....                                        | 56                               |
| Palæochorda.....                      | 259, 261                    | Pasithea aciculata.....                                  | 221                              |
| prima.....                            | <b>259</b> , 261            | lugubris.....                                            | 221                              |
| Palæocyclus.....                      | 62                          | notata.....                                              | 221                              |
| kirbyi.....                           | <b>62</b>                   | scale.....                                               | 221                              |
| Palæomanon.....                       | 192                         | sulcata.....                                             | 220                              |
| roemerii.....                         | <b>192</b>                  | striata.....                                             | 220                              |
| Palæomoera.....                       | 100                         | Patella.....                                             | 154                              |
| Palæophycus.....                      | 260, 261                    | levettei.....                                            | <b>154</b>                       |
| occidentalis.....                     | <b>260</b> , 261            | tenella.....                                             | <b>223</b>                       |
| Palæophyllum.....                     | 155                         | Patoceras.....                                           | 104                              |
| divaricans.....                       | 155                         | Patula.....                                              | 153                              |
| Palasterina.....                      | 24                          | Pecopteris.....                                          | 246                              |
| (Shoenaster) fimbriata.....           | 24                          | bullatus.....                                            | 246                              |
| Paliurus.....                         | 143                         | cyclobola.....                                           | <b>246</b>                       |
| pentangulatus.....                    | <b>143</b>                  | falcatus.....                                            | 246                              |
| Pallium.....                          | 215, 216, 217               | mexicana.....                                            | <b>246</b>                       |
| crassicardo.....                      | <b>215</b>                  | ? odontopteroides.....                                   | <b>231</b>                       |
| estrellanum.....                      | <b>215</b> , 216, 217       | undulata.....                                            | <b>231</b>                       |
| Palmula sagittaria.....               | 47                          | var.....                                                 | 231                              |
| Paludina conradi.....                 | <b>16</b>                   | Pecten.....                                              | 24, 30, 205, 207, 208, 211, 212, |
| leai.....                             | <b>16</b>                   | 213, 214, 215, 216, 217, 245, <b>200</b> , 262, 266, 271 |                                  |
| leidyi.....                           | <b>16</b>                   | acutiplicatus.....                                       | <b>30</b>                        |
| multilineata.....                     | <b>16</b> , 221             | affinis.....                                             | 49                               |
| peculiaris.....                       | <b>16</b>                   | altiplectus.....                                         | <b>215</b>                       |
| retusa.....                           | <b>16</b>                   | altiplicatus.....                                        | <b>217</b>                       |
| trochiformis.....                     | <b>16</b>                   | bella.....                                               | 49                               |
| vetula.....                           | <b>16</b> , 221             | bellistriata.....                                        | <b>22</b>                        |
| Pandora.....                          | 216                         | bellistriatus.....                                       | 49                               |
| bilirata.....                         | 216                         | broadheadii.....                                         | 51                               |
| Panopæa.....                          | 207, 210, 217, 269, 271     | calvatus.....                                            | 220                              |
| cooperi.....                          | <b>19</b>                   | catilliformis.....                                       | <b>212</b> , 214                 |
| decisa.....                           | 269                         | (Chlamys) craticulus.....                                | 266                              |
| elliptica.....                        | <b>271</b>                  | comptus.....                                             | <b>224</b> , 226                 |
| estrellana.....                       | 50                          | coosensis.....                                           | <b>256</b>                       |
| (myacites) subelliptica.....          | <b>18</b>                   | delumbis.....                                            | <b>208</b>                       |
| occidentalis.....                     | <b>16</b>                   | deserti.....                                             | <b>211</b> , 213, 217            |
| orientalis.....                       | 210                         | discus.....                                              | <b>217</b>                       |
| pecterosa.....                        | <b>207</b>                  | extenuatus.....                                          | <b>22</b> , 49                   |
| texana.....                           | 255                         | hawii.....                                               | 51                               |
| Papillina atilis.....                 | 222                         | humphreysii.....                                         | <b>205</b>                       |
| Papyridea (Liopistha) elegantula..... | 47                          | illawarrensis.....                                       | 226                              |
| rostrata.....                         | 47                          | kneiskerni.....                                          | 271                              |
| sancti-sabæ.....                      | 47                          | lenuisculus.....                                         | 226                              |
| Paracyclas.....                       | 138, 149, 194, 235          | magnolia.....                                            | <b>217</b>                       |
| elliptica var. occidentalis.....      | 149                         | meekii.....                                              | <b>215</b> , <b>217</b>          |
| occidentalis.....                     | 194                         | missonriensis ?.....                                     | 51                               |
| peracridens.....                      | <b>235</b>                  | mitis.....                                               | <b>226</b>                       |
| sabina.....                           | <b>238</b>                  | (Monotis ?) coloradensis.....                            | <b>245</b>                       |
| Paradoxide.....                       | 31, 108                     | nebrascensis.....                                        | <b>15</b>                        |
| Paradoxides.....                      | 108, 198, 199, 248          | neglectus.....                                           | 51                               |

|                                                  | Page.                              |                                                               | Page.                             |
|--------------------------------------------------|------------------------------------|---------------------------------------------------------------|-----------------------------------|
| <i>Pecten nevadanus</i> .....                    | <b>212</b> , 214                   | <i>Pentremites norwoodii</i> .....                            | <b>249</b> , 251                  |
| <i>newberryi</i> .....                           | <b>260</b> , 262                   | <i>pyriformis</i> .....                                       | 149, 248                          |
| <i>obtus</i> .....                               | <b>208</b>                         | <i>sirius</i> .....                                           | <b>118</b>                        |
| <i>occidentalis</i> .....                        | 245, 274                           | <i>stelliformis</i> .....                                     | <b>249</b> , 251                  |
| <i>pabloensis</i> .....                          | <b>216</b>                         | <i>sulcatus</i> .....                                         | 255                               |
| <i>planicostatus</i> .....                       | <b>266</b>                         | ( <i>Tricoelocrinus</i> ) <i>obliquatus</i> ..                | 91                                |
| <i>propatulus</i> .....                          | 49, <b>206</b>                     | ( <i>Troostocrinus</i> ?) <i>woodmanii</i> <b>54</b> , 83, 87 |                                   |
| <i>quadriricostatus</i> .....                    | 255                                | <i>wortheni</i> .....                                         | 83                                |
| <i>quinquenarius</i> .....                       | 266                                | <i>Periploma claibornensis</i> .....                          | 220                               |
| <i>rigbyi</i> .....                              | <b>241</b>                         | <i>Periplomya</i> .....                                       | 269, 271                          |
| <i>rigida</i> .....                              | <b>13</b> , 47                     | <i>elliptica</i> .....                                        | 269                               |
| <i>squamuliferus</i> (?) .....                   | 266                                | <i>truncata</i> .....                                         | <b>271</b>                        |
| ( <i>Syncyclonema</i> ?) <i>perlamellosus</i> .. | 266                                | <i>Perischæchinidæ</i> .....                                  | 42, 43, 44, 60                    |
| <i>tenuicollis</i> .....                         | <b>224</b> , 226                   | <i>Perisoptera</i> .....                                      | 102                               |
| <i>tenuilineatus</i> .....                       | <b>24</b>                          | <i>Peronæa</i> .....                                          | 100                               |
| <i>tenuisculus</i> .....                         | <b>224</b>                         | <i>Peronæoderma</i> .....                                     | 100                               |
| <i>tenuitestus</i> .....                         | 266                                | <i>Perna</i> .....                                            | 29, 32, 217                       |
| <i>utahensis</i> .....                           | <b>22</b>                          | <i>montana</i> .....                                          | 50, <b>217</b>                    |
| <i>venustus</i> .....                            | 266                                | <i>torta</i> .....                                            | 50                                |
| <i>Pectenidæ</i> .....                           | 30, 260, 261, 271                  | <i>Pernopecten</i> .....                                      | 59                                |
| <i>Pectinibranchiata</i> .....                   | 34, 102, 106, 132, 134, 135        | <i>shumardianus</i> .....                                     | 59                                |
| <i>Pectinidæ</i> .....                           | 32, 33, 97, 132, 133, 263          | <i>Perisonota</i> .....                                       | 268                               |
| <i>Pectunculus</i> .....                         | 99, 217                            | <i>protexta</i> .....                                         | 268                               |
| <i>ellipsis</i> .....                            | 220                                | <i>Petalodus alleghaniensis</i> .....                         | 20                                |
| <i>nitens</i> .....                              | 50, <b>206</b>                     | <i>Petraster</i> .....                                        | 26                                |
| <i>patulus</i> .....                             | <b>206</b>                         | <i>wilberanus</i> .....                                       | <b>26</b>                         |
| <i>siouxensis</i> .....                          | <b>13</b>                          | <i>Petricola</i> .....                                        | 211, 213, 271                     |
| <i>subimbricatus</i> .....                       | <b>18</b>                          | <i>nova ægyptica</i> .....                                    | <b>271</b>                        |
| <i>Pectunculina parvula</i> .....                | <b>15</b>                          | <i>pedroana</i> .....                                         | <b>211</b> , 213                  |
| <i>Pelagus vanuxemi</i> .....                    | 222                                | <i>Petricolidæ</i> .....                                      | 271                               |
| <i>Penitella</i> .....                           | 212, 214                           | <i>Petrospongia</i> .....                                     | 43                                |
| <i>spelæa</i> .....                              | 214                                | <i>Phacops</i> .....                                          | 59, 195                           |
| <i>speleum</i> .....                             | <b>212</b>                         | <i>anchiops</i> .....                                         | 232                               |
| <i>Pennularia nobilis</i> .....                  | 203                                | <i>callicephalus</i> .....                                    | 232                               |
| <i>varidis</i> .....                             | 203                                | <i>rana</i> .....                                             | 59, <b>195</b>                    |
| <i>Pentacrinidæ</i> .....                        | 33, 133, 262                       | <i>Phacopsidæ</i> .....                                       | 109                               |
| <i>Pentacrinites</i> .....                       | 33, 94, 262                        | <i>Pharella</i> .....                                         | 101, 158                          |
| <i>asteriscus</i> .....                          | 236, 262                           | <i>dakotensis</i> .....                                       | 101                               |
| <i>Pentacrinus</i> .....                         | 133                                | ? <i>pealci</i> .....                                         | <b>76</b> , 158                   |
| <i>astericus</i> .....                           | <b>18</b>                          | <i>Phasianella haleana</i> .....                              | 48                                |
| <i>asteriscus</i> .....                          | 33, 133                            | <i>perovata</i> .....                                         | 48                                |
| <i>Pentadia</i> .....                            | <b>223</b> , 226                   | <i>punctata</i> .....                                         | 48                                |
| <i>corona</i> .....                              | 226                                | <i>Phenopora multipora</i> .....                              | <b>231</b>                        |
| <i>reniformis</i> .....                          | <b>223</b>                         | <i>Phillipsia</i> .....                                       | 39, 74, 84, 87, 90, 149, 179, 196 |
| <i>spatangus</i> .....                           | <b>223</b>                         | — ? .....                                                     | 74, 253                           |
| <i>trigonia</i> .....                            | <b>223</b>                         | <i>bufo</i> .....                                             | 149                               |
| <i>Pentamerus</i> .....                          | 58, 62, 116, 193                   | <i>coronata</i> .....                                         | 196                               |
| <i>borealis</i> .....                            | <b>62</b>                          | ( <i>Griffithides</i> ) <i>bufo</i> .....                     | <b>65</b> , 84                    |
| <i>comis</i> .....                               | 58, 193                            | <i>lodiensis</i> .....                                        | 90                                |
| <i>huspodus</i> .....                            | 247                                | <i>portlockii</i> .....                                       | <b>39</b> , 84                    |
| <i>lenticularis</i> .....                        | <b>116</b>                         | <i>sangamonensis</i> <b>39</b> , 87, 179                      |                                   |
| <i>lotis</i> .....                               | <b>193</b>                         | <i>scitula</i> .....                                          | <b>39</b> , 87, 179               |
| <i>oblongus</i> .....                            | 247                                | <i>major</i> .....                                            | 74                                |
| <i>subglobosus</i> .....                         | <b>58</b>                          | <i>perannulata</i> .....                                      | <b>256</b> , 257                  |
| <i>Pentinidæ</i> .....                           | 133                                | <i>scitula</i> .....                                          | 74                                |
| <i>Pentremites</i> .....                         | 26, 54, 83, 91, 118, 149, 249, 251 | <i>stevensoni</i> .....                                       | <b>69</b>                         |
| <i>burlingtonensis</i> .....                     | <b>64</b> , 83                     | <i>tuberculata</i> .....                                      | <b>65</b>                         |
| <i>conoideus</i> .....                           | 149                                | <i>Philocrinus</i> .....                                      | 36                                |
| <i>cornutus</i> .....                            | 26                                 | <i>nebrascensis</i> .....                                     | 36                                |
| <i>florealis</i> .....                           | 255                                | <i>pelvis</i> .....                                           | 36                                |
| <i>godoni</i> .....                              | 149                                | <i>Pholadidæ</i> .....                                        | 101, 270, 272                     |
| ( <i>Granatocrinus</i> ) <i>granulosus</i> ..    | <b>38</b>                          | <i>Pholadomya</i> .....                                       | 29, 34, 35, 92, 100, 164, 205,    |
| <i>laterniformis</i> .....                       | <b>249</b> , 251                   | 207, 209, 218, 269                                            |                                   |
| <i>melo</i> .....                                | <b>249</b> , 251                   | ( <i>Cymella</i> ) <i>undata</i> .....                        | 48                                |
| <i>var. projectus</i> .....                      | <b>26</b>                          | <i>decisa</i> .....                                           | <b>207</b>                        |

|                                                             | Page.                             |                                                  | Page.                                                             |
|-------------------------------------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------------------------------------|
| <i>Pholadomya</i> ( <i>Goniomya</i> ) <i>borealis</i> ..... | 17                                | — <i>secalina</i> .....                          | 107, 170                                                          |
| ( <i>Homomya</i> ) <i>audax</i> .....                       | 225                               | <i>subelongata</i> .....                         | 16                                                                |
| <i>curvata</i> (?) .....                                    | 225                               | <i>Physanoidæ</i> .....                          | 110, 239                                                          |
| <i>glendonensis</i> .....                                   | 225                               | <i>Physella</i> .....                            | 107                                                               |
| <i>humilis</i> .....                                        | 21, 34                            | <i>Physetocrinus</i> .....                       | 81                                                                |
| <i>kingii</i> .....                                         | 164                               | <i>Physidæ</i> .....                             | 106, 107, 135, 139                                                |
| <i>marylandica</i> .....                                    | 205                               | <i>Physinae</i> .....                            | 34                                                                |
| <i>occidentalis</i> .....                                   | 269                               | <i>Physodon</i> .....                            | 107                                                               |
| <i>orbiculata</i> .....                                     | 35                                | <i>Piestoecheilus</i> .....                      | 49, 103, 159                                                      |
| <i>papyracea</i> .....                                      | 29, 100                           | <i>vicksburgensis</i> .....                      | 222                                                               |
| ( <i>Platymya</i> ) <i>undata</i> .....                     | 225                               | <i>Pileopsis tenella</i> .....                   | 226                                                               |
| ( <i>Procardia</i> ) <i>hodgii</i> .....                    | 190                               | <i>alta</i> .....                                | 226                                                               |
| <i>roemeri</i> .....                                        | 269                               | <i>Pinna</i> .....                               | 73, 111, 121, 127, 132, 134, 158, 178,<br>196, 245, 259, 267, 270 |
| <i>sancti-sabæ</i> .....                                    | 220                               | <i>calamitoides</i> .....                        | 256                                                               |
| <i>subelongata</i> .....                                    | 17, 92                            | <i>consimilis</i> .....                          | 196                                                               |
| <i>subventricosa</i> .....                                  | 18, 100                           | <i>hinrichsiana</i> .....                        | 121                                                               |
| <i>syriaca</i> .....                                        | 209                               | <i>inexpectans</i> .....                         | 196                                                               |
| <i>texana</i> .....                                         | 218                               | <i>kingii</i> .....                              | 111                                                               |
| <i>undata</i> M. & H. ....                                  | 15, 48                            | <i>lakesi</i> .....                              | 145, 158                                                          |
| <i>undata</i> Dana .....                                    | 223                               | <i>laqueata</i> .....                            | 267                                                               |
| <i>Pholadomyidæ</i> .....                                   | 100                               | <i>?lingula</i> .....                            | 245                                                               |
| <i>Pholas</i> .....                                         | 205, 270                          | <i>ludlovi</i> .....                             | 259                                                               |
| <i>cithara</i> .....                                        | 270                               | <i>peracuta</i> .....                            | 73, 132, 178                                                      |
| <i>cuneata</i> .....                                        | 18                                | <i>petrina</i> .....                             | 127, 134, 152                                                     |
| <i>?lata</i> .....                                          | 270                               | <i>rostriformis</i> .....                        | 270                                                               |
| <i>petrosa</i> .....                                        | 205                               | <i>stevensoni</i> .....                          | 152                                                               |
| <i>Pholidocidaris</i> .....                                 | 83                                | <i>Pinnidæ</i> .....                             | 111, 121, 132, 134, 267                                           |
| <i>irregularis</i> .....                                    | 83, 87                            | <i>Pinnularia affinis</i> .....                  | 229                                                               |
| <i>Pholidops</i> .....                                      | 79, 192                           | <i>amphioxys</i> .....                           | 229                                                               |
| <i>bellula</i> .....                                        | 192                               | <i>digitus</i> .....                             | 229                                                               |
| <i>cincinnatiensis</i> .....                                | 79                                | <i>gastrum</i> .....                             | 229                                                               |
| <i>quadrangularis</i> .....                                 | 192                               | <i>macilenta</i> .....                           | 229                                                               |
| <i>Phonemus</i> ( <i>Flabellina</i> ) <i>cuneatus</i> ..... | 47                                | <i>mesogongyla</i> .....                         | 229                                                               |
| <i>sagittarius</i> .....                                    | 47                                | <i>oregonica</i> .....                           | 229                                                               |
| <i>Phorus</i> .....                                         | 138, 208                          | <i>pachyptera</i> ? .....                        | 203, 229                                                          |
| <i>exoneratus</i> .....                                     | 138                               | <i>placentula</i> .....                          | 229                                                               |
| <i>syriacus</i> .....                                       | 208                               | <i>viridis</i> .....                             | 229                                                               |
| <i>Phragmoceras</i> .....                                   | 39, 91, 248                       | <i>viridula</i> .....                            | 229                                                               |
| <i>ventricosum</i> ? .....                                  | 247                               | <i>Pirenella</i> .....                           | 106, 161                                                          |
| <i>walshii</i> .....                                        | 39, 91                            | <i>Pisces</i> .....                              | 224                                                               |
| <i>Phyllites</i> .....                                      | 246                               | <i>Pisidium</i> .....                            | 137                                                               |
| <i>coriaceous</i> .....                                     | 246                               | <i>sagittatum</i> .....                          | 137, 168                                                          |
| <i>venosissimus</i> .....                                   | 246                               | <i>Pitar</i> .....                               | 100                                                               |
| <i>Phylloceras</i> .....                                    | 93, 104                           | <i>Placenticeras</i> .....                       | 93, 104                                                           |
| <i>? halli</i> .....                                        | 104                               | <i>placenta</i> .....                            | 104                                                               |
| <i>? ramosus</i> .....                                      | 93                                | <i>var. intercalare</i> .....                    | 104                                                               |
| <i>Phylloda</i> .....                                       | 100                               | ( <i>Sphenodiscus</i> ) <i>lenticulare</i> ..... | 104                                                               |
| <i>Phyllograptus</i> .....                                  | 126, 129                          | <i>vancouverense</i> .....                       | 93                                                                |
| <i>loringi</i> .....                                        | 126, 129                          | <i>Placunopsis</i> .....                         | 86, 90, 142                                                       |
| <i>Phyllopoda</i> .....                                     | 61                                | <i>carbonaria</i> .....                          | 41, 86, 87                                                        |
| <i>Phyllothea australis</i> .....                           | 227                               | <i>hilliardensis</i> .....                       | 142                                                               |
| <i>Phylloteuthis</i> .....                                  | 21, 105                           | <i>recticardinalis</i> .....                     | 90                                                                |
| <i>subovata</i> .....                                       | 105                               | <i>Plagiarea</i> .....                           | 98                                                                |
| <i>subovatus</i> .....                                      | 21                                | <i>Plagiostoma dumosa</i> .....                  | 222                                                               |
| <i>Physa</i> .....                                          | 107, 135, 137, 141, 143, 161, 197 | <i>echinatum</i> .....                           | 47                                                                |
| — ? .....                                                   | 143, 161, 167, 168                | <i>pelagicum</i> .....                           | 47                                                                |
| <i>bridgerensis</i> .....                                   | 77, 135, 159, 170                 | <i>Planaria nitens</i> .....                     | 221                                                               |
| <i>carletoni</i> .....                                      | 77, 143, 167                      | <i>Planella</i> .....                            | 35                                                                |
| <i>copei</i> .....                                          | 139, 161, 169                     | <i>Planorbella</i> .....                         | 34, 106                                                           |
| <i>felix</i> .....                                          | 141, 161, 169                     | <i>Planorbinae</i> .....                         | 34                                                                |
| <i>kanabensis</i> .....                                     | 137                               | <i>Planorbis</i> .....                           | 34, 95, 106, 107, 112, 135, 137, 153,<br>159, 161                 |
| <i>longuiscula</i> .....                                    | 16                                | — ? .....                                        | 135                                                               |
| <i>nebrascensis</i> .....                                   | 16                                | <i>equalis</i> .....                             | 153, 170                                                          |
| <i>pleromatis</i> .....                                     | 135, 170                          | <i>amplexus</i> .....                            | 17                                                                |
| <i>prisca</i> .....                                         | 180, 197                          |                                                  |                                                                   |
| <i>rhomboidea</i> .....                                     | 16                                |                                                  |                                                                   |



|                                                             | Page.                                                                      |                                                 | Page.                                                                                  |
|-------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------|
| <i>Planorbis</i> ( <i>Bathymphalus</i> ) <i>amplexus</i> .. | 106, 161, 169                                                              | <i>Platycrinites</i> <i>aqualis</i> ..          | 82                                                                                     |
| <i>kanabensis</i> ..                                        | <b>137</b> , 169                                                           | <i>burlingtonensis</i> ..                       | 82                                                                                     |
| <i>plano-convexus</i> ..                                    | 106, 161, 169                                                              | ( <i>Eucladocrinus</i> ) <i>montanaensis</i> .. | <b>71</b>                                                                              |
| <i>cirratus</i> ..                                          | 159, 170                                                                   | <i>balli</i> ..                                 | 82                                                                                     |
| <i>convolutus</i> ..                                        | <b>16</b> , 106, 161, 169                                                  | <i>hemisphericus</i> ..                         | 83                                                                                     |
| <i>var.</i> ..                                              | 106                                                                        | <i>incomptus</i> ..                             | 83                                                                                     |
| <i>fragilis</i> ..                                          | <b>17</b>                                                                  | <i>planus</i> ..                                | 82                                                                                     |
| ( <i>Gyraulus</i> ) <i>militaris</i> ..                     | <b>153</b> , 170                                                           | <i>parvulus</i> ..                              | 85                                                                                     |
| <i>leidyi</i> ..                                            | <b>21</b> , 107, 170                                                       | <i>subspinosus</i> ..                           | 82                                                                                     |
| <i>lunata</i> ..                                            | 170                                                                        | <i>tenuibranchiatus</i> ..                      | 82                                                                                     |
| ( <i>Menetus</i> ) <i>nebrascensis</i> ..                   | 107                                                                        | <i>Platycrinus</i> ..                           | 23, 26, 38, 42, 43, 59, 60, 117, 118, 127, 130, 144, 154, 163, 165, 248, 249, 250, 251 |
| <i>vetustus</i> ..                                          | 107                                                                        | <i>—</i> ? ..                                   | 127, 130                                                                               |
| <i>nebrascensis</i> ..                                      | 170                                                                        | <i>americanus</i> ..                            | <b>249</b> , 251                                                                       |
| <i>spectabilis</i> ..                                       | <b>22</b> , 95, 112                                                        | <i>bonoensis</i> ..                             | <b>144</b> , 165                                                                       |
| <i>var. utahensis</i> ..                                    | 95, 112                                                                    | <i>burlingtonensis</i> ..                       | <b>249</b> , 251                                                                       |
| <i>subumbilicatus</i> ..                                    | <b>16</b>                                                                  | <i>corrugatus</i> ..                            | <b>249</b> , 251                                                                       |
| <i>tenuivolvis</i> ..                                       | <b>17</b>                                                                  | <i>discoides</i> ..                             | <b>249</b> , 251                                                                       |
| <i>utahensis</i> ..                                         | <b>22</b> , 135, 170                                                       | <i>haydeni</i> ..                               | 163                                                                                    |
| <i>var. spectabilis</i> ..                                  | 170                                                                        | <i>hemisphericus</i> ..                         | <b>38</b> , 60, 154                                                                    |
| <i>veternus</i> ..                                          | 24, 167                                                                    | <i>incomptus</i> ..                             | <b>117</b>                                                                             |
| <i>vetulus</i> ..                                           | <b>21</b>                                                                  | <i>multibranchiatus</i> ..                      | <b>26</b>                                                                              |
| <i>vetustus</i> ..                                          | 170                                                                        | <i>niotensis</i> ..                             | <b>38</b> , 60                                                                         |
| <i>Plantæ</i> ..                                            | 128, 259, 261                                                              | <i>oweni</i> ..                                 | <b>26</b>                                                                              |
| <i>Planularia</i> <i>cuneata</i> ..                         | 47                                                                         | <i>parvulus</i> ..                              | <b>38</b>                                                                              |
| <i>Platyceras</i> ..                                        | 40, 57, 59, 60, 74, 80, 84, 86, 90, 117, 132, 149, 165, 178, 186, 194, 197 | <i>penicillus</i> ..                            | <b>23</b> , 44                                                                         |
| <i>attenuatum</i> ..                                        | <b>67</b>                                                                  | <i>planus</i> ..                                | 44, 59, <b>249</b> , 251                                                               |
| <i>biserialis</i> ..                                        | 60                                                                         | <i>plenus</i> ..                                | <b>23</b>                                                                              |
| <i>bivalve</i> ..                                           | <b>117</b>                                                                 | ( <i>Pleurocrinus</i> ) <i>asper</i> ..         | <b>26</b> , 59                                                                         |
| <i>conradi</i> ..                                           | <b>194</b>                                                                 | <i>subspinosus</i> ..                           | 42                                                                                     |
| <i>dumosum var. attenuatum</i> ..                           | 80                                                                         | <i>pleurovimensis</i> ..                        | <b>118</b>                                                                             |
| <i>equilatera</i> ..                                        | 84, 149                                                                    | <i>prattenanus</i> ..                           | <b>23</b> , 42                                                                         |
| <i>fissurella</i> ..                                        | 84                                                                         | <i>quinquenodus</i> ..                          | <b>118</b>                                                                             |
| <i>haliotoides</i> ..                                       | <b>40</b> , 59                                                             | <i>scobina</i> ..                               | <b>26</b> , 59                                                                         |
| <i>infundibulum</i> ..                                      | 84                                                                         | <i>verrucosus</i> ..                            | <b>117</b>                                                                             |
| <i>lævigatum</i> ..                                         | <b>40</b>                                                                  | <i>yandellii</i> ..                             | <b>249</b> , 251                                                                       |
| <i>minutissimum</i> ..                                      | <b>186</b>                                                                 | <i>Platyostoma</i> ..                           | 25, 80, 148, 194, 197                                                                  |
| <i>multispinosum</i> ..                                     | <b>67</b> , 80                                                             | <i>inornatum</i> ..                             | <b>197</b>                                                                             |
| <i>nebrascense</i> ..                                       | 132, 179                                                                   | <i>lineatum</i> ..                              | 194                                                                                    |
| <i>nebrascensis</i> ..                                      | <b>74</b>                                                                  | <i>nana</i> ..                                  | <b>25</b> , 27                                                                         |
| <i>nodosum</i> ..                                           | 194                                                                        | <i>niagarensis</i> ..                           | 148                                                                                    |
| <i>occidens</i> ..                                          | <b>197</b>                                                                 | <i>var. trigonostoma</i> ..                     | 80                                                                                     |
| ( <i>Orthonychia</i> ) <i>chesterense</i> ..                | <b>40</b>                                                                  | ? <i>trigonostoma</i> ..                        | <b>67</b>                                                                              |
| <i>infundibulum</i> ..                                      | <b>40</b>                                                                  | ? <i>tumida</i> ..                              | <b>25</b>                                                                              |
| <i>lodiense</i> ..                                          | <b>67</b> , 89                                                             | <i>Platychisma</i> ..                           | 195                                                                                    |
| <i>pyramidatum</i> ..                                       | 57                                                                         | ? <i>ambiguum</i> ..                            | <b>195</b>                                                                             |
| <i>quincyense</i> ..                                        | 60                                                                         | ? <i>depressum</i> ..                           | <b>223</b>                                                                             |
| <i>subplicatum</i> ..                                       | <b>40</b> , 59                                                             | ? <i>mccoyi</i> ..                              | <b>195</b>                                                                             |
| <i>paralum</i> ..                                           | <b>117</b>                                                                 | <i>pelicoides</i> ..                            | 40                                                                                     |
| <i>piso</i> ..                                              | 197                                                                        | <i>Platytrachus</i> <i>goldfussii</i> ..        | 220                                                                                    |
| [?] <i>reversum</i> ..                                      | 60                                                                         | <i>stokesii</i> ..                              | 220                                                                                    |
| <i>spinigerum</i> ..                                        | 86                                                                         | <i>Plectosolen</i> ? <i>diegoensis</i> ..       | 220                                                                                    |
| <i>spirale</i> ..                                           | 57                                                                         | <i>parallelus</i> ..                            | 220                                                                                    |
| <i>subundatum</i> ..                                        | <b>57</b>                                                                  | <i>Plethomytilus</i> ..                         | 194                                                                                    |
| <i>thetiforme</i> ..                                        | <b>194</b>                                                                 | <i>Pleurocrinus</i> ..                          | 38, 42                                                                                 |
| <i>tortum</i> ..                                            | <b>67</b> , 90                                                             | <i>Pleurodictyum</i> ..                         | 57                                                                                     |
| <i>tribulosum</i> ..                                        | <b>165</b>                                                                 | <i>problematicum</i> ..                         | 57                                                                                     |
| <i>uncum</i> ..                                             | <b>40</b> , 84                                                             | <i>Pleurolimnæa</i> ..                          | 106, 161                                                                               |
| <i>undulatum</i> ..                                         | <b>194</b>                                                                 | <i>Pleuromya</i> ..                             | 260, 262                                                                               |
| <i>ventricosum</i> ..                                       | 59                                                                         | <i>newtoni</i> ..                               | <b>260</b> , 262                                                                       |
| <i>Platychisma</i> <i>depressum</i> ..                      | 226                                                                        | <i>Pleurophorus</i> ..                          | 32, 33, 38, 45, 61, 73, 86, 90, 151, 197, 258                                          |
| <i>oculus</i> ..                                            | 226                                                                        | <i>—</i> ? ..                                   | 92                                                                                     |
| <i>rotundatum</i> ..                                        | 226                                                                        | ? <i>angulatus</i> ..                           | 38, 92                                                                                 |
| <i>Platycrinites</i> ..                                     | 82, 83, 85                                                                 | <i>calhouni</i> ..                              | 33                                                                                     |
|                                                             |                                                                            | ? ( <i>cardinia</i> ) <i>subcuneata</i> ..      | <b>19</b>                                                                              |



|                                         | Page.                                                                                                       |                                        | Page.                                                                    |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------|
| <i>Pleurophorus costatiformis</i> ..... | <b>38</b> , 61                                                                                              | <i>Pleurotomaria pratteni</i> .....    | <b>25</b> , 45                                                           |
| <i>oblongus</i> .....                   | <b>73</b> , 86                                                                                              | <i>proutiana</i> .....                 | <b>258</b>                                                               |
| <i>occidentalis</i> .....               | <b>19</b> , 32, 73, 258                                                                                     | (Scalites ?) <i>tropidophora</i> ..... | <b>70</b> , 79                                                           |
| <i>meeki</i> .....                      | <b>197</b>                                                                                                  | <i>scitula</i> .....                   | <b>25</b> , 45                                                           |
| <i>subcostatus</i> .....                | <b>38</b> , 45, 151                                                                                         | <i>shumardi</i> .....                  | <b>25</b> , 43                                                           |
| ? <i>subcuneata</i> .....               | 20                                                                                                          | <i>speciosa</i> .....                  | <b>25</b> , 45                                                           |
| <i>subcuneatus</i> .....                | 33, 51                                                                                                      | <i>sphaerulata</i> .....               | 179                                                                      |
| <i>tropidophorus</i> .....              | <b>90</b>                                                                                                   | <i>spironema</i> .....                 | <b>40</b> , 87                                                           |
| <i>Pleurotoma</i> .....                 | 212, 214, 237                                                                                               | <i>subscalaris</i> .....               | <b>25</b> , 46                                                           |
| <i>beaumontii</i> .....                 | 222                                                                                                         | <i>subconstricta</i> .....             | <b>24</b> , 45                                                           |
| <i>cœlata</i> .....                     | 222                                                                                                         | <i>subdecussata</i> .....              | 74                                                                       |
| <i>childreni</i> .....                  | 222                                                                                                         | <i>subturbinata</i> .....              | <b>19</b> , 20, 32                                                       |
| <i>desnoyersii</i> .....                | 222                                                                                                         | <i>subsinuata</i> .....                | <b>25</b> , 45                                                           |
| <i>kellogii</i> .....                   | 222                                                                                                         | <i>strzeleckiana</i> .....             | 226                                                                      |
| <i>lonsdalii</i> .....                  | 222                                                                                                         | <i>tabulata</i> .....                  | 149, 179                                                                 |
| <i>minor</i> .....                      | <b>256</b>                                                                                                  | <i>taggarti</i> .....                  | <b>88</b> , 164                                                          |
| <i>monilifera</i> .....                 | 222                                                                                                         | <i>tenuicincta</i> .....               | <b>24</b> , 45                                                           |
| <i>nodocarinata</i> .....               | 222                                                                                                         | <i>texana</i> .....                    | 49                                                                       |
| <i>obliqua</i> .....                    | 222                                                                                                         | <i>textiligera</i> .....               | <b>67</b> , 89                                                           |
| <i>ocoyana</i> .....                    | 212                                                                                                         | <i>triflata</i> .....                  | <b>223</b> , 224                                                         |
| <i>pagoda</i> .....                     | <b>237</b>                                                                                                  | <i>tumida</i> .....                    | 46                                                                       |
| <i>platysoma</i> .....                  | <b>237</b>                                                                                                  | <i>turbiniformis</i> .....             | <b>25</b> , 45, 179                                                      |
| <i>sayi</i> .....                       | 222                                                                                                         | <i>uniguilata</i> .....                | <b>231</b>                                                               |
| <i>texana</i> .....                     | 222                                                                                                         | <i>valvatiformis</i> .....             | <b>40</b> , 87                                                           |
| <i>transmontana</i> .....               | <b>212</b> , 214                                                                                            | <i>Pleurotomariidæ</i> .....           | 32, 39, 63, 103                                                          |
| <i>varicostata</i> .....                | 222                                                                                                         | <i>Plicatula</i> .....                 | 93, 136, 142, 218, 266                                                   |
| <i>venusta</i> .....                    | <b>237</b>                                                                                                  | <i>arenaria</i> .....                  | <b>93</b>                                                                |
| <i>Pleurotomaria</i> .....              | 24, 32, 39, 43, 44, 45, 56, 63, 74,<br>79, 81, 89, 117, 147, 149, 151,<br>164, 165, 179, 191, 197, 248, 258 | <i>hydrotheca</i> .....                | <b>136</b> , 142                                                         |
| — ? .....                               | 63, 248                                                                                                     | <i>incongrua</i> .....                 | <b>219</b>                                                               |
| <i>angulata</i> ? .....                 | 248                                                                                                         | <i>striato-costata</i> .....           | 52                                                                       |
| <i>broadheadi</i> .....                 | <b>165</b>                                                                                                  | <i>urticosa</i> .....                  | 266                                                                      |
| <i>brazoensis</i> .....                 | 45                                                                                                          | <i>Plumulites</i> .....                | 191                                                                      |
| <i>casii</i> .....                      | <b>56</b>                                                                                                   | <i>Podosphenia pupula</i> .....        | 229                                                                      |
| <i>chesterensis</i> .....               | <b>25</b> , 44                                                                                              | <i>Podophthalma</i> .....              | 32, 132, 133                                                             |
| <i>conoides</i> .....                   | <b>40</b> , 87                                                                                              | <i>Podozamites crassifolia</i> .....   | <b>246</b>                                                               |
| <i>cornula</i> .....                    | <b>232</b>                                                                                                  | <i>Pœcilopoda</i> .....                | 189, 191, 195, 198                                                       |
| <i>coxana</i> .....                     | <b>40</b> , 87                                                                                              | <i>Polycellia</i> .....                | 275                                                                      |
| <i>cyclonemoides</i> .....              | <b>56</b>                                                                                                   | <i>Polynema</i> .....                  | 98                                                                       |
| <i>excelsa</i> .....                    | <b>246</b>                                                                                                  | <i>Polyphemopsis</i> .....             | 27, 46, 86, 149, 155, 179                                                |
| <i>granulostriata</i> .....             | <b>24</b> , 45                                                                                              | — (?) .....                            | 179                                                                      |
| <i>grayvillensis</i> .....              | 74, 147, 164                                                                                                | <i>chrysallis</i> .....                | <b>40</b> , 86                                                           |
| <i>gurleyi</i> .....                    | <b>67</b> , 87                                                                                              | <i>fusiformis</i> .....                | 149                                                                      |
| <i>halliana</i> .....                   | <b>258</b>                                                                                                  | <i>inornata</i> .....                  | 46                                                                       |
| <i>haydeniana</i> .....                 | 74                                                                                                          | <i>nitidula</i> .....                  | 46, 155, 179                                                             |
| <i>humerosa</i> .....                   | <b>19</b> , 20, 32                                                                                          | <i>peracuta</i> .....                  | 46, 179                                                                  |
| <i>inornata</i> .....                   | <b>74</b>                                                                                                   | <i>Polypi</i> .....                    | 71, 96, 108, 109, 121, 126, 148, 149, 177                                |
| <i>lucina</i> .....                     | 81                                                                                                          | <i>Polypora</i> .....                  | 72, 127, 131                                                             |
| <i>lenticularis</i> .....               | 248                                                                                                         | <i>biarmica</i> .....                  | 52                                                                       |
| <i>lonensis</i> .....                   | <b>191</b>                                                                                                  | <i>marginata</i> .....                 | 52                                                                       |
| <i>marconiana</i> .....                 | 74                                                                                                          | <i>mexicana</i> .....                  | <b>274</b>                                                               |
| <i>mississippiensis</i> .....           | <b>117</b>                                                                                                  | <i>stragula</i> .....                  | <b>127</b> , 131                                                         |
| <i>morrisiana</i> .....                 | 224, 226                                                                                                    | <i>submarginata</i> .....              | <b>72</b>                                                                |
| <i>mullicaensis</i> .....               | 49                                                                                                          | <i>Polyrhytes</i> .....                | 106                                                                      |
| (Murchisonia) <i>meta</i> .....         | <b>39</b>                                                                                                   | <i>Polyzoa</i> .....                   | 38, 60, 68, 72, 78, 80, 88, 90, 94, 127, 131,<br>144, 147, 151, 163, 178 |
| <i>muralis</i> .....                    | <b>250</b>                                                                                                  | <i>Porambonites</i> .....              | 234                                                                      |
| <i>nevadensis</i> .....                 | 197                                                                                                         | <i>obscurus</i> .....                  | <b>234</b>                                                               |
| <i>newportensis</i> .....               | <b>165</b>                                                                                                  | <i>Porcellia</i> .....                 | 59, 117, 118                                                             |
| <i>nodomarginata</i> .....              | 197                                                                                                         | <i>crassinoda</i> .....                | <b>117</b>                                                               |
| <i>nuda</i> .....                       | <b>223</b> , 226                                                                                            | <i>nodosa</i> .....                    | 59                                                                       |
| <i>obtusispira</i> .....                | <b>258</b>                                                                                                  | <i>obliquinoda</i> .....               | <b>118</b>                                                               |
| <i>perhumerosa</i> .....                | <b>74</b>                                                                                                   | <i>Porifera</i> .....                  | 154, 189, 192                                                            |
| <i>perizomata</i> .....                 | <b>151</b>                                                                                                  | <i>Porites astriformis</i> .....       | 247                                                                      |
| <i>peronata</i> .....                   | <b>258</b>                                                                                                  | <i>Poroecrinus</i> .....               | 37, 55                                                                   |
|                                         |                                                                                                             | <i>crassus</i> .....                   | <b>37</b> , 55                                                           |

|                                | Page.                                   |                                             | Page.                                           |
|--------------------------------|-----------------------------------------|---------------------------------------------|-------------------------------------------------|
| Porocrinus pentagonius .....   | 37, 55                                  | Poteriocrinus (Scaphiocrinus) unicus .....  | 91                                              |
| Portlandia .....               | 98                                      | wachsmuthi .....                            | 26                                              |
| Posidonomya .....              | 90, 110, 194                            | spinosus .....                              | 249, 251                                        |
| devonica .....                 | 194                                     | subimpressus .....                          | 26, 60                                          |
| fracta .....                   | 90                                      | swallovi .....                              | 23, 42                                          |
| fragosa .....                  | 110                                     | tenuibrachiatus .....                       | 26, 60                                          |
| lævis .....                    | 194                                     | tumidus .....                               | 249, 251                                        |
| Potamida .....                 | 105                                     | (Zeacrinus) carbonarius .....               | 37                                              |
| Poteriocrinites .....          | 77, 82, 83, 84, 85                      | Priscoficus hornii .....                    | 221                                             |
| biselli .....                  | 84                                      | Prionocyclus .....                          | 94, 104, 150, 265                               |
| (Dendrocrinus) caduceus .....  | 77                                      | macombi .....                               | 94                                              |
| dyeri .....                    | 68, 77                                  | (Prionotropis) woolgari .....               | 104                                             |
| casei .....                    | 77                                      | wyomingensis .....                          | 159, 265                                        |
| cincinnatien-                  |                                         | Prionotropis .....                          | 104                                             |
| sis .....                      | 68, 77                                  | Procardia .....                             | 100                                             |
| polydactylus .....             | 68, 77                                  | Productella .....                           | 193                                             |
| posticus .....                 | 77                                      | Productidæ .....                            | 31, 62, 108, 109, 121                           |
| hardinensis .....              | 84                                      | Productus .....                             | 24, 26, 30, 44, 45, 58, 61, 62, 72, 85, 89, 92, |
| macoupinensis .....            | 85                                      | 94, 108, 109, 119, 130, 131, 149, 155, 163, |                                                 |
| ? perplexus .....              | 82                                      | 177, 193, 196, 233, 235, 257                |                                                 |
| (Scaphiocrinus) æqualis .....  | 83                                      | — ? .....                                   | 62, 89, 109, 232                                |
| bayensis .....                 | 84                                      | æquicostatus .....                          | 253, 274                                        |
| carbonarius .....              | 85                                      | brachytherus .....                          | 225                                             |
| coreyi .....                   | 83                                      | calhounianus .....                          | 20, 245, 257                                    |
| depressus .....                | 83                                      | canerini .....                              | 52                                              |
| hemispheri-                    |                                         | cora .....                                  | 177, 243, 255                                   |
| cus .....                      | 85                                      | var. mogayoni .....                         | 243                                             |
| huntsvillæ .....               | 84                                      | costatoides .....                           | 245                                             |
| macadamsi .....                | 83                                      | costatus .....                              | 72, 109, 131, 149, 177, 243, 245, 255           |
| randolphen-                    |                                         | ? .....                                     | 232                                             |
| sis .....                      | 84                                      | delawarii .....                             | 243                                             |
| unicus .....                   | 83                                      | dissimilis .....                            | 62                                              |
| (Zeacrinus) arboreus .....     | 84                                      | elegans .....                               | 235                                             |
| armiger .....                  | 84                                      | exanthematus .....                          | 58                                              |
| cariniferous .....             | 84                                      | flemingii .....                             | 52, 243                                         |
| compactilis .....              | 89                                      | var. burlingtonensis .....                  | 235                                             |
| compactulus .....              | 84                                      | fragilis .....                              | 223, 225                                        |
| concinus .....                 | 64, 83                                  | giganteus .....                             | 163                                             |
| formosus .....                 | 84                                      | hirsutiforme .....                          | 193                                             |
| [Hydreionocrinus]              |                                         | horrescens .....                            | 52                                              |
| acanthoporus .....             | 85                                      | horridus .....                              | 52                                              |
| mucrospinus .....              | 85                                      | ivesi .....                                 | 245                                             |
| subtumides .....               | 84                                      | koninckianus .....                          | 52                                              |
| Poteriocrinus .....            | 23, 26, 37, 38, 42, 43, 60, 85, 91, 118 | lævicostatus ? .....                        | 235                                             |
| 163, 249, 251                  |                                         | lævicostus .....                            | 116                                             |
| bursæformis .....              | 118                                     | lasallensis .....                           | 85                                              |
| carinatus .....                | 26, 60                                  | latissimus .....                            | 92                                              |
| depressus .....                | 85                                      | leplayi ? .....                             | 257                                             |
| ? enormis .....                | 26                                      | longispinus .....                           | 52, 72, 85, 109, 131, 177                       |
| hemisphericus .....            | 52                                      | magnus .....                                | 26, 61                                          |
| indianensis .....              | 38, 60                                  | mexicanus .....                             | 131, 256, 257                                   |
| montanaensis .....             | 163                                     | multistriatus .....                         | 22, 94, 109                                     |
| obuncus .....                  | 118                                     | muricatus .....                             | 131                                             |
| occidentalis .....             | 249, 251                                | nanus .....                                 | 24, 45                                          |
| rhombiferus .....              | 249, 251                                | nebrascensis .....                          | 52, 72, 85, 131, 177, 250,                      |
| salignoideus .....             | 118                                     | 274                                         |                                                 |
| (Scaphiocrinus) bayensis ..... | 38                                      | nevadensis .....                            | 109                                             |
| carbonarius .....              | 26                                      | nodosus .....                               | 245, 246                                        |
| decadacty-                     |                                         | norwoodi .....                              | 20, 257                                         |
| lus .....                      | 23, 43                                  | occidentalis .....                          | 245                                             |
| norwoodi .....                 | 38                                      | orbinianus .....                            | 52                                              |
| solidus .....                  | 26                                      | parvus .....                                | 24, 44, 130                                     |
| subtumidus .....               | 38                                      | pertenuis .....                             | 72                                              |
| tenuidacty-                    |                                         | pileolus .....                              | 256, 257                                        |
| lus .....                      | 38, 60                                  | popei .....                                 | 256, 257                                        |

|                                                 | Page.                              |                                                 | Page.                                          |
|-------------------------------------------------|------------------------------------|-------------------------------------------------|------------------------------------------------|
| <i>Productus prattenianus</i> .....             | 20, 52, 72, 109, 131               | Protozoa .....                                  | 31, 41, 43, 55, 56, 58, 71, 120, 121, 131, 177 |
| ( <i>Productella</i> ) <i>hallanus</i> .....    | <b>193</b>                         | <i>Psammobia</i> .....                          | 260, 262                                       |
| <i>lachrymosus</i> var. ....                    |                                    | ? <i>cancellato-sculpta</i> .....               | 48                                             |
| <i>limus</i> .....                              | 193                                | ? <i>prematura</i> .....                        | <b>260</b> , 262                               |
| <i>lachrymosus</i> var. ....                    |                                    | <i>Psammobiidae</i> .....                       | 260, 262                                       |
| <i>stigmatus</i> .....                          | 193                                | <i>Pseudobuccinum</i> .....                     | <b>18</b> , 103                                |
| <i>lachrymosus navi-</i>                        |                                    | <i>nebrascensis</i> .....                       | <b>18</b> , 103                                |
| <i>cella</i> .....                              | 193                                | <i>Pseudoliva sulcata</i> .....                 | 222                                            |
| <i>speciosus</i> .....                          | 193                                | <i>Pseudomonotis</i> .....                      | 73, 262                                        |
| <i>subaculeatus</i> .....                       | 193                                | ( <i>Eumicrotis</i> ) <i>curta</i> .....        | 262                                            |
| <i>shumardianus</i> .....                       | 193                                | <i>orbiculata</i> .....                         | <b>260</b> , 262                               |
| <i>truncatus</i> .....                          | 193                                | <i>hawni</i> .....                              | 51                                             |
| <i>punctatus</i> .....                          | 72, 85, 131, 155, 177, 243, 255    | <i>radialis</i> .....                           | 73                                             |
| <i>pustulosus</i> (?) .....                     | 20, 242                            | <i>sinuata</i> .....                            | 53                                             |
| <i>pyxidiformis</i> .....                       | 243                                | <i>Pseudonutilus</i> .....                      | 104                                            |
| <i>rogersi</i> .....                            | 20, 52, 233, 245                   | <i>Pseudoptera</i> .....                        | 97, 143                                        |
| <i>scabriculus</i> .....                        | 243, 245                           | <i>Psephis tantilla</i> .....                   | 50                                             |
| <i>scitulus</i> .....                           | <b>24</b> , 43                     | <i>Psilomya</i> .....                           | 134                                            |
| <i>semireticulatus</i> .....                    | 30, 72, 109, 131, 177, 232,        | <i>Pteria</i> .....                             | 33, 97, 142, 151, 153, 158, 260, 263, 267      |
| 233, 235, 243, 245, 274                         |                                    | <i>abrupta</i> .....                            | 47                                             |
| var. <i>antiquatus</i> ..                       | 257                                | <i>convexo plano</i> .....                      | 47                                             |
| <i>semistriatus</i> .....                       | <b>22</b> , 94, 109                | <i>cretacea</i> .....                           | 47                                             |
| <i>splendens</i> (?) .....                      | 20, 245, 253, 274                  | <i>haydeni</i> .....                            | 47, 97                                         |
| <i>subaculeatus</i> .....                       | 94, 108, 196                       | <i>iridescens</i> .....                         | 47                                             |
| <i>subhorridus</i> .....                        | <b>109</b>                         | <i>laripes</i> .....                            | 47, 267                                        |
| <i>symmetricus</i> .....                        | 72, 177                            | <i>linguiformis</i> .....                       | 47, 97, 263                                    |
| <i>villiersi</i> .....                          | 274                                | var. <i>subgibbosa</i> .....                    | 97                                             |
| <i>viminalis</i> .....                          | <b>119</b>                         | [?] <i>multangula</i> .....                     | 50                                             |
| <i>Prætida</i> .....                            | 109                                | <i>navicula</i> .....                           | <b>267</b>                                     |
| <i>Prætus</i> .....                             | 39, 59, 79, 81, 109, 195, 232, 235 | <i>nebrascana</i> .....                         | 47                                             |
| <i>ellipticus</i> .....                         | <b>39</b> , 59                     | ( <i>Oxytoma</i> ) <i>erecta</i> .....          | <b>153</b> , 157                               |
| <i>haldemani</i> .....                          | 196                                | ? <i>gastrodes</i> .....                        | 143                                            |
| <i>loganensis</i> .....                         | <b>235</b>                         | <i>mucronata</i> .....                          | 180                                            |
| <i>marginalis</i> .....                         | 196                                | <i>munsteri</i> .....                           | 33, 49                                         |
| <i>peroccidens</i> .....                        | <b>235</b>                         | <i>nebrascana</i> .....                         | 97, 263                                        |
| ( <i>Phæton</i> ) <i>denticulatus</i> .....     | <b>109</b>                         | <i>salinensis</i> .....                         | <b>151</b> , 158                               |
| <i>planimargitus</i> .....                      | <b>67</b>                          | <i>parkensis</i> .....                          | 142                                            |
| <i>planimarginatus</i> .....                    | 81                                 | <i>pedernalis</i> .....                         | 47                                             |
| <i>spurlocki</i> .....                          | <b>69</b> , 79                     | <i>petrosa</i> .....                            | 47, 267                                        |
| <i>Promacrus</i> .....                          | 68, 89                             | <i>planisulca</i> .....                         | 47                                             |
| <i>andrewsi</i> .....                           | 89                                 | ( <i>Pseudoptera</i> ) <i>fibrosa</i> .....     | 97, 263                                        |
| <i>Protarca</i> .....                           | 155                                | <i>propleura</i> .....                          | 143                                            |
| <i>vetusta</i> .....                            | 155                                | <i>sublevis</i> .....                           | <b>260</b> , 263                               |
| <i>Protaspongia</i> .....                       | 189                                | ( <i>Pterinea</i> ) <i>morganensis</i> .....    | <b>40</b>                                      |
| <i>fenestrata</i> .....                         | 189                                | ?? <i>stabilitatis</i> .....                    | <b>158</b>                                     |
| <i>Protaster</i> .....                          | 78, 83                             | <i>subgibbosa</i> .....                         | 47                                             |
| ? <i>granuliferus</i> .....                     | 70, 78                             | <i>triangularis</i> .....                       | 47                                             |
| ? <i>gregarius</i> .....                        | 83                                 | <i>Pteriidae</i> .....                          | 29, 30                                         |
| <i>Prothyris</i> .....                          | 74, 89                             | 32, 33, 97, 110, 111, 132, 133, 260, 267, 270   |                                                |
| <i>elegans</i> .....                            | <b>69</b> , 74                     | <i>Pteriinae</i> .....                          | 32, 33                                         |
| <i>meeki</i> .....                              | 76                                 | <i>Pterinea</i> .....                           | 29, 45, 56, 58, 59, 194, 196                   |
| <i>Protista</i> .....                           | 154                                | <i>flabella</i> .....                           | 194                                            |
| <i>Prosobranchiata</i> .....                    | 32, 34                             | <i>macroptera</i> .....                         | 226                                            |
| <i>Prosopocephala</i> .....                     | 132, 264                           | ( <i>Monopteria</i> ) <i>gibbosa</i> .....      | <b>41</b> , 45                                 |
| <i>Protocardia</i> .....                        | 34, 92, 99, 218                    | <i>newarkensis</i> .....                        | <b>194</b>                                     |
| ( <i>Leptocardia</i> ?) <i>pertenuis</i> .....  | 100                                | <i>pintoensis</i> .....                         | <b>196</b>                                     |
| <i>rara</i> .....                               | 100                                | ( <i>Pteronites</i> ?) <i>newarkensis</i> ..... | <b>67</b>                                      |
| <i>subquadrata</i> .....                        | 100                                | ? <i>subpapyracea</i> .....                     | <b>41</b> , 58                                 |
| ( <i>Protocardia</i> ) <i>salinaensis</i> ..... | 99                                 | <i>thebesensis</i> .....                        | <b>56</b>                                      |
| <i>scitula</i> .....                            | 92                                 | <i>undulata</i> .....                           | <b>59</b>                                      |
| <i>shumardi</i> .....                           | 34                                 | <i>Pteriniinae</i> .....                        | 29, 32, 33                                     |
| <i>Protocaris</i> .....                         | <b>199</b>                         | <i>Pterinepecten</i> .....                      | 196                                            |
| <i>marshi</i> .....                             | <b>199</b>                         | <i>hoosacensis</i> .....                        | <b>196</b>                                     |
| <i>Protocardium</i> .....                       | 268, 271                           | <i>spio</i> .....                               | <b>196</b>                                     |
| <i>cryptum</i> .....                            | 271                                | <i>Pterocerella</i> .....                       | 48                                             |

|                                                 | Page.                                                                           |                                                | Page.                                                                                                                                                                 |
|-------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Pterocerella tippana</i> .....               | 48                                                                              | <i>Pupa arenula</i> .....                      | 137, 159, 170                                                                                                                                                         |
| <i>Pterocephalus</i> .....                      | 190, 234                                                                        | <i>atavuncula</i> .....                        | 159, 170                                                                                                                                                              |
| <i>Pterophyllum robustum</i> .....              | 246                                                                             | <i>bigsbyi</i> .....                           | 167                                                                                                                                                                   |
| <i>fragile</i> .....                            | 246                                                                             | <i>helicoides</i> .....                        | 16                                                                                                                                                                    |
| <i>Pteropoda</i> .....                          | 28, 31, 39, 56, 67, 84, 89, 118, 126, 138,<br>149, 151, 165, 189, 191, 195, 198 | <i>incolata</i> .....                          | 137, 170                                                                                                                                                              |
| <i>Pterotocrinus</i> .....                      | 44                                                                              | ? <i>leidyi</i> .....                          | 77                                                                                                                                                                    |
| <i>chesterensis</i> .....                       | 44                                                                              | ( <i>Leucocheila</i> ) <i>incolata</i> .....   | 150                                                                                                                                                                   |
| <i>crassus</i> .....                            | 44                                                                              | <i>vermillionensis</i> .....                   | 167                                                                                                                                                                   |
| <i>Ptychodictya</i> .....                       | 78, 80, 90, 144, 147, 151, 163                                                  | <i>vetusta</i> .....                           | 167                                                                                                                                                                   |
| ( <i>Stictopora</i> ) <i>carbonaria</i> .....   | 67, 90                                                                          | <i>Purpura</i> .....                           | 219                                                                                                                                                                   |
| <i>gilberti</i> .....                           | 66, 80                                                                          | <i>Pyramia</i> .....                           | 222                                                                                                                                                                   |
| <i>sereata</i> .....                            | 90                                                                              | <i>Pyramidellidae</i> .....                    | 103, 134                                                                                                                                                              |
| <i>shafferi</i> .....                           | 68, 78                                                                          | <i>Pyramimitra costata</i> .....               | 221                                                                                                                                                                   |
| <i>triangulata</i> .....                        | 144, 147, 151, 162                                                              | <i>Pyramus</i> .....                           | 224                                                                                                                                                                   |
| <i>Ptychaspis</i> .....                         | 186, 190, 234                                                                   | <i>ellipticus</i> .....                        | 224                                                                                                                                                                   |
| <i>minuta</i> .....                             | 190                                                                             | <i>myiformis</i> .....                         | 224                                                                                                                                                                   |
| <i>pusulosa</i> .....                           | 234                                                                             | <i>Pyrgorhynchus mortonis</i> .....            | 222                                                                                                                                                                   |
| <i>speciosus</i> .....                          | 186                                                                             | <i>Pyrgulifera</i> .....                       | 70, 95, 162                                                                                                                                                           |
| <i>Ptychoceras</i> .....                        | 104, 265                                                                        | <i>humerosa</i> .....                          | 95, 112, 162, 168                                                                                                                                                     |
| <i>crassum</i> .....                            | 261, 265                                                                        | <i>Pyrifusus</i> .....                         | 163                                                                                                                                                                   |
| <i>leai</i> .....                               | 49                                                                              | ? <i>flexicostatus</i> .....                   | 49                                                                                                                                                                    |
| <i>meekianum</i> .....                          | 261, 265                                                                        | ? <i>haleanus</i> .....                        | 49                                                                                                                                                                    |
| <i>mortoni</i> .....                            | 17, 104                                                                         | ? <i>impressus</i> .....                       | 49                                                                                                                                                                    |
| <i>vernemilii</i> .....                         | 49                                                                              | <i>intertextus</i> .....                       | 49                                                                                                                                                                    |
| <i>Ptychoceratidae</i> .....                    | 104                                                                             | ( <i>Neptunella</i> ) <i>intertextus</i> ..... | 103                                                                                                                                                                   |
| <i>Ptychodus whipplei</i> .....                 | 243, 246                                                                        | <i>newberryi</i> .....                         | 103                                                                                                                                                                   |
| <i>Ptychoparia</i> .....                        | 129, 190, 191, 198, 199                                                         | <i>subturrites</i> .....                       | 103                                                                                                                                                                   |
| ? <i>annectans</i> .....                        | 191                                                                             | <i>newberryi</i> .....                         | 49                                                                                                                                                                    |
| <i>auctus</i> .....                             | 190                                                                             | <i>subturrites</i> .....                       | 49                                                                                                                                                                    |
| ( <i>Euloma</i> ?) <i>affinis</i> .....         | 190                                                                             | <i>Pyrina parryi</i> .....                     | 233                                                                                                                                                                   |
| <i>dissimilis</i> .....                         | 190                                                                             | <i>Pyropsis</i> .....                          | 103                                                                                                                                                                   |
| <i>granulosus</i> .....                         | 190                                                                             | <i>bairdi</i> .....                            | 103                                                                                                                                                                   |
| <i>hagueti</i> .....                            | 190                                                                             | <i>var. rotula</i> .....                       | 103                                                                                                                                                                   |
| <i>heviceps</i> .....                           | 190                                                                             | <i>Pyruia bairdi</i> .....                     | 14, 16, 49                                                                                                                                                            |
| <i>linmarssoni</i> .....                        | 190                                                                             | <i>glabra</i> .....                            | 256                                                                                                                                                                   |
| <i>nitidus</i> .....                            | 190                                                                             | <i>modesta</i> .....                           | 50                                                                                                                                                                    |
| <i>occidentalis</i> .....                       | 190                                                                             |                                                |                                                                                                                                                                       |
| <i>orestes</i> .....                            | 199                                                                             | Q.                                             |                                                                                                                                                                       |
| <i>var. thersites</i> .....                     | 199                                                                             | <i>Quadrula</i> .....                          | 105                                                                                                                                                                   |
| <i>onangondiana</i> .....                       | 198                                                                             |                                                |                                                                                                                                                                       |
| <i>var. aurora</i> .....                        | 199                                                                             | R.                                             |                                                                                                                                                                       |
| <i>oweni</i> .....                              | 190                                                                             | <i>Radiata</i> .....                           | 33, 37, 40, 41, 42, 43, 44, 45, 54, 55, 56, 57,<br>58, 60, 68, 71, 77, 85, 94, 96, 108, 109, 117, 133, 136,<br>138, 142, 144, 154, 165, 226, 227, 235, 236, 260, 261. |
| <i>pernasutus</i> .....                         | 190                                                                             | <i>Radix</i> .....                             | 105                                                                                                                                                                   |
| <i>prospectensis</i> .....                      | 190                                                                             | <i>Radula</i> .....                            | 266                                                                                                                                                                   |
| ( <i>Pterocephalus</i> ) <i>laticeps</i> .....  | 190                                                                             | <i>acutilineata</i> .....                      | 266                                                                                                                                                                   |
| <i>occidens</i> .....                           | 190                                                                             | <i>pelagica</i> .....                          | 266                                                                                                                                                                   |
| <i>quadrata</i> .....                           | 199                                                                             | <i>reticulata</i> .....                        | 266                                                                                                                                                                   |
| <i>robbi</i> .....                              | 198                                                                             | <i>Raphistoma</i> .....                        | 55, 103, 130, 191, 234                                                                                                                                                |
| <i>regersi</i> .....                            | 199                                                                             | <i>acuta</i> .....                             | 234                                                                                                                                                                   |
| <i>similis</i> .....                            | 190                                                                             | <i>lenticularis</i> .....                      | 55                                                                                                                                                                    |
| <i>var. robustus</i> .....                      | 190                                                                             | <i>nasoni</i> .....                            | 191                                                                                                                                                                   |
| ( <i>Solenopleura</i> ?) <i>breviceps</i> ..... | 190                                                                             | ? <i>rotuliformis</i> .....                    | 108                                                                                                                                                                   |
| <i>tener</i> .....                              | 199                                                                             | ? <i>trochiscus</i> .....                      | 108, 130                                                                                                                                                              |
| <i>uniusulcatus</i> .....                       | 190                                                                             | <i>Receptaculites</i> .....                    | 55, 91, 129, 190                                                                                                                                                      |
| <i>Ptychophyllum</i> .....                      | 108                                                                             | — ? .....                                      | 55, 129                                                                                                                                                               |
| ? <i>infundibulum</i> .....                     | 108                                                                             | <i>ellipticus</i> .....                        | 190                                                                                                                                                                   |
| <i>Ptychopteria</i> .....                       | 196                                                                             | <i>elongatus</i> .....                         | 190                                                                                                                                                                   |
| <i>protoforme</i> .....                         | 196                                                                             | <i>formosus</i> .....                          | 64, 91                                                                                                                                                                |
| <i>Pulmonaria</i> .....                         | 61                                                                              | <i>globularis</i> .....                        | 55                                                                                                                                                                    |
| <i>Pulmonata</i> .....                          | 102, 105, 107                                                                   | <i>mammillaris</i> .....                       | 190                                                                                                                                                                   |
| <i>Pulmonifera</i> .....                        | 34, 135, 197                                                                    | <i>oweni</i> .....                             | 55                                                                                                                                                                    |
| — ? .....                                       | 264                                                                             | <i>Remopleurides</i> .....                     | 185                                                                                                                                                                   |
| <i>Psilomya</i> .....                           | 101, 127                                                                        | <i>striatulus</i> .....                        | 185                                                                                                                                                                   |
| <i>Pupa</i> .....                               | 137, 159                                                                        |                                                |                                                                                                                                                                       |



|                                  | Page.                                                                                                                   |                                 | Page.                          |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|
| Renssellaria .....               | 57, 63                                                                                                                  | Rhynchonella pugnus .....       | 193                            |
| conradi .....                    | 57                                                                                                                      | pustulosa .....                 | <b>116</b> , 235               |
| levis .....                      | <b>63</b>                                                                                                               | rocky montana .....             | 131                            |
| Requienia .....                  | 176                                                                                                                     | speciosa .....                  | 57                             |
| patagiata .....                  | <b>176</b>                                                                                                              | subtrigona .....                | <b>24</b>                      |
| texana .....                     | 176                                                                                                                     | tennesseensis .....             | 148                            |
| Retepora archimedes .....        | 248                                                                                                                     | tethys .....                    | 193                            |
| indianensis .....                | <b>248</b>                                                                                                              | texana .....                    | <b>257</b>                     |
| Retzia .....                     | 30, 72, 79, 116, 131, 147, 163, 178, 196, 257                                                                           | thera .....                     | <b>196</b>                     |
| acambonia .....                  | 119                                                                                                                     | uta .....                       | 20, 52, 131, 177, 245          |
| (Ambonia?) altirostris .....     | <b>119</b>                                                                                                              | wasatchensis .....              | <b>127</b> , 131               |
| compressa .....                  | <b>30</b>                                                                                                               | wilmingtonensis .....           | 220                            |
| ? meekana .....                  | <b>256</b>                                                                                                              | Rhynchonellidae .....           | 30, 33, 62, 108, 109, 131, 262 |
| meekiana .....                   | 257                                                                                                                     | Rhytophorus .....               | 95, 112, 137, 161              |
| mermonii .....                   | 20, 52, 131, 178                                                                                                        | meekii .....                    | <b>137</b> , 161, 168          |
| papillata .....                  | <b>256</b> , 257                                                                                                        | priscus .....                   | 95, 112, 161, 168              |
| punctulifera .....               | 73                                                                                                                      | Rimella curvilirata .....       | 48                             |
| radialis .....                   | 196                                                                                                                     | Ringicula acutispira .....      | 48                             |
| semplicita .....                 | <b>116</b>                                                                                                              | biplicata .....                 | 221                            |
| (Trematospira) granulifera ..... | <b>68</b> , 79                                                                                                          | pulchella .....                 | 48                             |
| woosteri .....                   | <b>147</b> , 163                                                                                                        | subpellucida .....              | 48                             |
| Rhaphoneis foliacea .....        | 229                                                                                                                     | Ringiculida .....               | 101                            |
| lanceolata .....                 | 229                                                                                                                     | Ringiculina .....               | 29                             |
| oregonica .....                  | 229                                                                                                                     | Ringinella subpellucida .....   | 48                             |
| Rhiphidoglossa .....             | 102, 132, 133, 134                                                                                                      | Rissoidae .....                 | 106                            |
| Rhiphidoglossata .....           | 32, 34                                                                                                                  | Rostellaria ? .....             | 219                            |
| Rhizopoda .....                  | 31, 129, 131, 190                                                                                                       | americana .....                 | 48, <b>256</b>                 |
| Rhodea .....                     | 106                                                                                                                     | biangulata .....                | <b>14</b> , 48                 |
| Rhodocrinus .....                | 59, 150, 163                                                                                                            | ? collina .....                 | <b>219</b>                     |
| nanus .....                      | <b>40</b> , 59                                                                                                          | (texana) .....                  | <b>219</b>                     |
| vesperalis .....                 | <b>150</b> , 163                                                                                                        | fusiformis .....                | <b>13</b>                      |
| Rhombopora .....                 | <b>71</b> , 131                                                                                                         | indurata .....                  | <b>206</b>                     |
| lepidodendroides .....           | <b>71</b> , 131                                                                                                         | nebrascensis .....              | 48, 274                        |
| Rhynchonella .....               | 24, 30, 41, 57, 59, 72, 78, 80, 85, 116, 118, 126, 127, 130, 131, 148, 163, 165, 177, 193, 196, 235, 236, 245, 257, 262 | rostrata .....                  | 48                             |
| — ? .....                        | 30, 33, 36, 62, 257, 274                                                                                                | Rostellites .....               | 214, 219                       |
| angulata .....                   | 52                                                                                                                      | bellus .....                    | 48                             |
| argenturbica .....               | <b>126</b> , 130                                                                                                        | biplicatus .....                | 49                             |
| capax .....                      | 78, 148                                                                                                                 | conradi .....                   | 49                             |
| caput testudinus .....           | <b>118</b>                                                                                                              | nasutus .....                   | 49                             |
| carolina .....                   | 80                                                                                                                      | texana .....                    | 219                            |
| castanea .....                   | <b>62</b> , 193                                                                                                         | texanus .....                   | <b>214</b>                     |
| dentata .....                    | 78, 148                                                                                                                 | Rostrifera .....                | 35                             |
| duplicata .....                  | 193                                                                                                                     | Rotella .....                   | 152                            |
| emmonsi .....                    | 193, <b>235</b>                                                                                                         | nana .....                      | 221                            |
| endlichi .....                   | <b>88</b> , 163                                                                                                         | verruculifera .....             | <b>152</b>                     |
| eurekensis .....                 | <b>196</b>                                                                                                              | Rotundaria .....                | 105                            |
| gnathophora .....                | <b>30</b> , 236                                                                                                         |                                 |                                |
| guadalupae .....                 | <b>256</b> , 257                                                                                                        | S.                              |                                |
| horsfordi .....                  | 193                                                                                                                     | Saccoerinus .....               | 56                             |
| indentata .....                  | <b>257</b>                                                                                                              | christyi .....                  | 56                             |
| (Leiorhynchus) laura .....       | 193                                                                                                                     | Sagenella .....                 | 187                            |
| nevadensis .....                 | <b>193</b>                                                                                                              | ambigua .....                   | <b>187</b>                     |
| sinuatus .....                   | 193                                                                                                                     | Sanguinolaria .....             | 259                            |
| metallica .....                  | <b>127</b> , 131                                                                                                        | oblata .....                    | <b>259</b>                     |
| missouriensis .....              | 41, 59                                                                                                                  | Sanguinolites .....             | 68, 80, 89, 194, 197           |
| myrina .....                     | <b>236</b> , 262                                                                                                        | aeolus .....                    | 89, 197                        |
| neglecta .....                   | 80                                                                                                                      | ? combensis .....               | <b>194</b>                     |
| var. scobina .....               | 70                                                                                                                      | ? gracilis .....                | <b>194</b>                     |
| nitens .....                     | 49                                                                                                                      | ? menia .....                   | <b>197</b>                     |
| ? occidentis .....               | <b>193</b>                                                                                                              | obliquus .....                  | <b>66</b>                      |
| opposita .....                   | <b>116</b>                                                                                                              | ? obliquus .....                | 89                             |
| osagenensis .....                | 72, 85                                                                                                                  | (Promacrus) missouriensis ..... | 69                             |
| ottumwa .....                    | <b>118</b> , 165                                                                                                        | nasutus .....                   | <b>69</b>                      |
|                                  |                                                                                                                         | rigidus .....                   | 194                            |

|                                                   | Page.                                                     |
|---------------------------------------------------|-----------------------------------------------------------|
| <i>Sanguinolites retusus</i> .....                | 197                                                       |
| <i>salteri</i> .....                              | 197                                                       |
| <i>sanduskyensis</i> .....                        | 66, 80                                                    |
| ? <i>sanduskyensis</i> .....                      | 194                                                       |
| <i>simplex</i> .....                              | 197                                                       |
| <i>striatus</i> .....                             | 197                                                       |
| <i>Sanguinolites ventricosus</i> .....            | 194                                                       |
| <i>Sarcinula</i> .....                            | 223                                                       |
| <i>costata</i> .....                              | 247                                                       |
| ? <i>obsoleta</i> .....                           | 232                                                       |
| ( <i>Porites</i> ?) <i>glabra</i> .....           | 247                                                       |
| <i>Saxicava</i> .....                             | 211, 213, 260, 263                                        |
| <i>abrupta</i> .....                              | 211, 213                                                  |
| <i>jurassica</i> .....                            | 260, 263                                                  |
| <i>Saxicavidae</i> .....                          | 101, 269, 271                                             |
| <i>Scala forshayii</i> .....                      | 48                                                        |
| <i>Scalaria</i> .....                             | 205, 237                                                  |
| <i>cerethiformis</i> .....                        | 14                                                        |
| <i>expansa</i> .....                              | 205                                                       |
| <i>forshayii</i> .....                            | 48                                                        |
| <i>texana</i> .....                               | 48                                                        |
| <i>unilineata</i> .....                           | 237                                                       |
| <i>Scalpellum inequicostatum</i> .....            | 48                                                        |
| <i>Scambula</i> .....                             | 268                                                       |
| <i>perplana</i> .....                             | 268                                                       |
| <i>Scaphiocrinus</i> .....                        | 26, 43, 60, 72, 82, 83, 84, 85, 91,<br>117, 144, 149, 165 |
| <i>clio</i> .....                                 | 82                                                        |
| <i>delicatus</i> .....                            | 82                                                        |
| <i>depressus</i> .....                            | 64                                                        |
| <i>fuscillus</i> .....                            | 82                                                        |
| <i>gibsoni</i> .....                              | 144, 149, 165                                             |
| <i>gurleyi</i> .....                              | 144, 149, 165                                             |
| ? <i>hemisphaericus</i> .....                     | 72                                                        |
| <i>juvenis</i> .....                              | 82                                                        |
| <i>macroductylus</i> .....                        | 82                                                        |
| <i>nanus</i> .....                                | 82                                                        |
| <i>notabilis</i> .....                            | 82                                                        |
| <i>penicillus</i> .....                           | 82                                                        |
| <i>rudis</i> .....                                | 82                                                        |
| <i>rusticellus</i> .....                          | 117                                                       |
| <i>scalaris</i> .....                             | 82                                                        |
| <i>striatus</i> .....                             | 82                                                        |
| <i>tethys</i> .....                               | 82                                                        |
| ( <i>Zeacrinus</i> ) <i>asper</i> .....           | 82                                                        |
| <i>lyra</i> .....                                 | 82                                                        |
| <i>scobina</i> .....                              | 82                                                        |
| <i>serratus</i> .....                             | 82                                                        |
| <i>Scaphites</i> .....                            | 28, 104, 135, 250, 265                                    |
| ( <i>Ammonites</i> ?) <i>comprimus</i> .....      | 250                                                       |
| <i>nodosus</i> .....                              | 250                                                       |
| ( <i>Discoscaphites</i> ) <i>abyssinus</i> .....  | 104                                                       |
| <i>cheyennensis</i> .....                         | 104                                                       |
| <i>conradi</i> .....                              | 104                                                       |
| <i>var. gu-</i><br><i>losus</i> .....             | 104                                                       |
| <i>conradi var. in-</i><br><i>termedius</i> ..... | 104                                                       |
| <i>mandanensis</i> .....                          | 104                                                       |
| <i>nicoletii</i> .....                            | 104                                                       |
| <i>larvæformis</i> .....                          | 19, 104                                                   |
| <i>mandanensis</i> .....                          | 274                                                       |
| <i>nicolleti</i> .....                            | 274                                                       |
| <i>nodosus</i> .....                              | 265                                                       |
| <i>var. brevis</i> .....                          | 104, 265                                                  |

|                                                            | Page.                                          |
|------------------------------------------------------------|------------------------------------------------|
| <i>Scaphites nodosus var. plenus</i> .....                 | 21, 104                                        |
| <i>quadrangularis</i> .....                                | 104, 265                                       |
| <i>ventricosus</i> .....                                   | 28, 104                                        |
| <i>vermiculus</i> .....                                    | 159                                            |
| <i>vermiformis</i> .....                                   | 28, 104                                        |
| <i>warreni</i> .....                                       | 104, 135, 265                                  |
| <i>wyomingensis</i> .....                                  | 265                                            |
| <i>Scaphitidae</i> .....                                   | 104, 135, 265                                  |
| <i>Scaphoides</i> .....                                    | 33                                             |
| <i>Scenella</i> .....                                      | 189                                            |
| ? <i>conula</i> .....                                      | 189                                            |
| <i>Schænaster</i> .....                                    | 44, 60                                         |
| <i>timbriatus</i> .....                                    | 44                                             |
| <i>wachsmuthi</i> .....                                    | 40, 60                                         |
| <i>Schizambon</i> .....                                    | 190                                            |
| <i>typicalis</i> .....                                     | 190                                            |
| <i>Schizocrinus nodosus</i> ? .....                        | 231                                            |
| <i>Schizodesma</i> .....                                   | 100                                            |
| <i>Schizodus</i> .....                                     | 24, 32, 44, 45, 73, 86, 89, 132, 178, 194, 197 |
| — ? .....                                                  | 45                                             |
| <i>amplus</i> .....                                        | 64, 86                                         |
| <i>chesterensis</i> .....                                  | 24, 44                                         |
| <i>cuneatus</i> .....                                      | 90, 197                                        |
| <i>curtiforme</i> .....                                    | 197                                            |
| <i>curtus</i> .....                                        | 41, 73, 86                                     |
| ( <i>Cytherodon</i> ) <i>orbicularis</i> .....             | 194                                            |
| <i>depareus</i> .....                                      | 197                                            |
| <i>medinaensis</i> .....                                   | 67, 89                                         |
| <i>obscurus</i> .....                                      | 51                                             |
| <i>ovatus</i> .....                                        | 32                                             |
| ( <i>Prisca</i> ) <i>perelegans</i> .....                  | 86                                             |
| <i>rossicus</i> .....                                      | 51, 52, 87                                     |
| <i>subtrigonalis</i> .....                                 | 67                                             |
| <i>pintoensis</i> .....                                    | 197                                            |
| <i>wheeleri</i> .....                                      | 73, 132, 178                                   |
| <i>Schizopyga</i> .....                                    | 215, 216                                       |
| <i>californiana</i> .....                                  | 215, 216                                       |
| <i>Schizothærus</i> .....                                  | 211, 213                                       |
| <i>nutalli</i> .....                                       | 211, 213                                       |
| <i>traskei</i> .....                                       | 211                                            |
| <i>Schoenaster</i> .....                                   | 24                                             |
| <i>Scoliostoma</i> .....                                   | 195                                            |
| <i>americana</i> .....                                     | 195                                            |
| <i>Scorpio carbonarius</i> .....                           | 53                                             |
| <i>Scutella</i> .....                                      | 205                                            |
| <i>aberti</i> .....                                        | 205                                            |
| <i>crustuloides</i> .....                                  | 222                                            |
| <i>jonesii</i> .....                                       | 222                                            |
| <i>lyelli</i> .....                                        | 220                                            |
| <i>pileus-sinensis</i> .....                               | 222                                            |
| <i>rogersi</i> .....                                       | 222                                            |
| <i>Seacrinus</i> ( <i>Prisca</i> ) <i>perelegans</i> ..... | 64                                             |
| <i>Sedidae</i> .....                                       | 98                                             |
| <i>Sedgewickia</i> .....                                   | 32, 38, 61, 79, 236                            |
| <i>altirostrata</i> .....                                  | 32                                             |
| <i>concava</i> .....                                       | 32, 236                                        |
| ? <i>compressa</i> .....                                   | 68, 79                                         |
| ? <i>fragilis</i> .....                                    | 68, 79                                         |
| ( <i>Grammysia</i> ?) <i>neglecta</i> .....                | 68, 79                                         |
| ( <i>Sanguinolites</i> ) ? <i>subarcuata</i> .....         | 38, 61                                         |
| <i>topekaensis</i> .....                                   | 32                                             |
| <i>Semicassis sowerbii</i> .....                           | 221                                            |
| <i>Seila</i> .....                                         | 102                                            |
| <i>Septopora cestriensis</i> .....                         | 87                                             |
| <i>Septastrea</i> ? <i>sexradiata</i> .....                | 42                                             |

|                                  | Page.                    |                                                  | Page.                                               |
|----------------------------------|--------------------------|--------------------------------------------------|-----------------------------------------------------|
| Serpula .....                    | 35, 105, 135, 144, 165   | Soleniscus planus .....                          | <b>151</b> , 175, 178                               |
| insita .....                     | <b>144</b> , 165         | typicus .....                                    | <b>25</b> , 46, 175, 178                            |
| intrica .....                    | <b>135</b>               | Solenocaris .....                                | 90                                                  |
| (Spirorbis) planorbites .....    | 51                       | Solenochilus .....                               | 65, 104                                             |
| ? tennicarinata .....            | 105                      | Solenocoelocaris .....                           | 101, 132, 264                                       |
| ? tennicarinatus .....           | <b>17</b>                | Solenoides .....                                 | <b>250</b>                                          |
| Serpulidæ .....                  | 35, 105, 135             | iowensis .....                                   | <b>250</b>                                          |
| Serrifusus .....                 | 103                      | Solenomya .....                                  | 45, 87, 90, 197                                     |
| Sigaretus scopulosum .....       | 59                       | ??anodontoides .....                             | <b>90</b>                                           |
| scopulosus .....                 | <b>206</b>               | biarmica .....                                   | 50                                                  |
| Siliqua .....                    | 270                      | curta .....                                      | <b>197</b>                                          |
| cretacea .....                   | 270                      | (Janeia) vetusta .....                           | <b>66</b>                                           |
| Sinistralia .....                | 103                      | radiata .....                                    | 45                                                  |
| Sinuopallia .....                | 264, 269                 | Solenopsis .....                                 | 74                                                  |
| Sinum scopulosum .....           | 50                       | solenoides .....                                 | 74                                                  |
| Siphonariidæ .....               | 102, 112                 | Solidula biplicata .....                         | 48                                                  |
| ? .....                          | 264                      | Solyma .....                                     | 269                                                 |
| Siphonida .....                  | 268                      | lineolata .....                                  | 269                                                 |
| Siphonostomata .....             | 264                      | Spatangidæ .....                                 | <b>96</b>                                           |
| Siphonotreta? curta .....        | <b>225</b>               | Sphæra .....                                     | 110                                                 |
| Skenidium .....                  | 192                      | whitneyi .....                                   | <b>110</b>                                          |
| devonicum .....                  | <b>192</b>               | Sphærella inflata .....                          | 220                                                 |
| Smithia .....                    | 62, 108                  | Sphærexochus .....                               | 91                                                  |
| hennahii .....                   | 108                      | romingeri .....                                  | 91                                                  |
| (Pachyphyllum) woodmani .....    | 123                      | Sphæriola .....                                  | 99, 260, 264, 269                                   |
| verrilli .....                   | <b>62</b>                | ? cordata .....                                  | 99                                                  |
| Solariidæ .....                  | 108, 180                 | ? endotrachys .....                              | 99                                                  |
| Solariorbis depressus .....      | 221                      | ? obliqua .....                                  | <b>88</b>                                           |
| lineatus .....                   | 221                      | transversa .....                                 | <b>260</b> , 264                                    |
| nitens .....                     | 221                      | umbonata .....                                   | <b>269</b>                                          |
| Solarium .....                   | 180                      | ? warrenana .....                                | 99                                                  |
| abyssinus .....                  | 48                       | Sphærium .....                                   | 105, 112, 135, 160                                  |
| henrici .....                    | 221                      | — ? .....                                        | 135                                                 |
| ornatum .....                    | 221                      | formosum .....                                   | 105, 160, 168                                       |
| pseudogranulatum .....           | 221                      | idahoense .....                                  | <b>65</b> , 112, 166, 170                           |
| wallalense .....                 | <b>180</b>               | planum .....                                     | <b>21</b> , 105, 160, 168                           |
| Solecurtus? ellipticus .....     | 225                      | recticardinale .....                             | <b>21</b> , 105, 160, 168                           |
| (Psammodia?) planulatus .....    | 225                      | rugosum .....                                    | <b>65</b> , 112, 166, 170                           |
| Solemya .....                    | 24, 80, 99, 153          | subellipticum .....                              | 105, 160, 168                                       |
| bilix .....                      | <b>153</b> , 157         | Sphærocerinus .....                              | <b>37</b>                                           |
| (Janeia) vetusta .....           | 80                       | Sphenodiscus .....                               | 104                                                 |
| protexta .....                   | 50                       | Sphenophyllum .....                              | 155                                                 |
| radiata .....                    | <b>24</b>                | Sphenophyllum emarginatum .....                  | 155                                                 |
| supplicata .....                 | 99                       | schlotheimi .....                                | 155                                                 |
| ventricosa .....                 | <b>205</b>               | Sphenopteris .....                               | 149, 246                                            |
| Solemyidæ .....                  | 99                       | acuta .....                                      | 149                                                 |
| Solen curtus .....               | 50                       | fremonti .....                                   | <b>231</b>                                          |
| ? dakotensis .....               | <b>18</b>                | lobifolia .....                                  | 226                                                 |
| diegoensis .....                 | 220                      | paucifolia .....                                 | <b>231</b>                                          |
| irradians .....                  | 48                       | triloba .....                                    | 231                                                 |
| parallelus .....                 | 220                      | trifoliata .....                                 | <b>231</b>                                          |
| (Solen curtus?) ellipticus ..... | <b>223</b>               | Sphenopoterium .....                             | <b>24</b> , 41, 43                                  |
| planulatus .....                 | <b>223</b>               | compressum .....                                 | <b>24</b> , 43                                      |
| subplicatus .....                | <b>15</b>                | cuneatum .....                                   | <b>24</b> , 43                                      |
| Solenidæ .....                   | 101, 279                 | enorme .....                                     | <b>24</b> , 41                                      |
| Soleniscus .....                 | <b>25</b> , 46, 151, 178 | var. depressum .....                             | 41                                                  |
| brevis .....                     | <b>151</b>               | obtusum .....                                    | <b>24</b> , 43                                      |
| (Macrocheilus) fusiformis .....  | 175, 178                 | Sphærocoryphe .....                              | 185                                                 |
| medialis .....                   | 175, 178                 | robustus .....                                   | <b>185</b>                                          |
| newberryi .....                  | 175, 178                 | Spiractæon .....                                 | 29                                                  |
| paludinaformis .....             | 175, 178                 | Spiraxis .....                                   | 221                                                 |
| ponderosus .....                 | 175, 178                 | Spirifer .....                                   | 30, 31, 41, 44, 57, 58, 61, 62, 73, 89, 90, 91, 92, |
| primigenius .....                | 175, 178                 | 94, 108, 109, 116, 118, 127, 130, 131, 148, 149, |                                                     |
| texanus .....                    | 175, 178                 | 155, 163, 165, 178, 225, 233, 245, 253, 257      |                                                     |
| ventricosus .....                | 175, 178                 | — ? .....                                        | 20, 36, 255                                         |

|                                           | Page.                                                    |
|-------------------------------------------|----------------------------------------------------------|
| <i>Spirifer acuminata</i> .....           | 149                                                      |
| <i>agelaius</i> .....                     | 163                                                      |
| <i>annectans</i> .....                    | <b>196</b>                                               |
| <i>cameratus</i> .....                    | 20, 52, 73, 85, 94, 131, 149,<br>178, 233, 245, 246, 257 |
| <i>carteri</i> .....                      | 89                                                       |
| <i>cedarensis</i> .....                   | 250                                                      |
| <i>centronatus</i> .....                  | 130                                                      |
| <i>compactus</i> .....                    | <b>62</b>                                                |
| <i>cupidatus</i> .....                    | 169                                                      |
| <i>darwinii</i> .....                     | 225                                                      |
| <i>desiderata</i> .....                   | <b>196</b>                                               |
| <i>duodecicostatus</i> .....              | 225                                                      |
| <i>englemanni</i> .....                   | 57, 94, 108                                              |
| <i>euritines</i> .....                    | 149, 250                                                 |
| <i>extenuatus</i> .....                   | 130                                                      |
| <i>fastigatus</i> .....                   | <b>64</b> , 91                                           |
| <i>formacula</i> .....                    | 58                                                       |
| <i>fultonensis</i> .....                  | 85                                                       |
| <i>glaber</i> .....                       | 225                                                      |
| var. <i>contracta</i> .....               | <b>26</b>                                                |
| <i>glans cerasus</i> .....                | <b>118</b>                                               |
| <i>gregaria</i> .....                     | 149                                                      |
| <i>guadalupensis</i> .....                | 257                                                      |
| <i>hemicyclus</i> .....                   | <b>57</b>                                                |
| <i>hemiplicata</i> .....                  | 20, <b>232</b>                                           |
| <i>hirtus</i> .....                       | <b>116</b>                                               |
| <i>inequicostatus</i> .....               | <b>250</b>                                               |
| <i>iowensis</i> .....                     | <b>250</b>                                               |
| <i>kentuckensis</i> .....                 | 20, 233, 274                                             |
| <i>kennicotti</i> .....                   | <b>62</b>                                                |
| <i>keokuk</i> .....                       | 92                                                       |
| <i>laminosus</i> .....                    | 52                                                       |
| <i>leidy</i> .....                        | 196                                                      |
| <i>ligus</i> .....                        | <b>250</b>                                               |
| <i>lineatus</i> .....                     | 20, 233, 243, 245                                        |
| (Martinia) <i>cooperensis</i> .....       | 41                                                       |
| <i>franklinii</i> .....                   | <b>63</b>                                                |
| <i>glaber</i> var. <i>contracta</i> ..... | 44, 127,<br>131                                          |
| <i>lineatus</i> .....                     | 30, 155, 178                                             |
| <i>maia</i> .....                         | 193                                                      |
| <i>meristoides</i> .....                  | <b>63</b>                                                |
| <i>peculiaris</i> .....                   | 130                                                      |
| <i>plano convexa</i> .....                | 178, 274                                                 |
| <i>plano convexus</i> .....               | 31, 73, 131                                              |
| <i>richardsoni</i> .....                  | <b>63</b>                                                |
| <i>sublineatus</i> .....                  | <b>63</b>                                                |
| <i>undifera</i> .....                     | 193                                                      |
| <i>menesebachanus</i> .....               | 274                                                      |
| <i>mexicanus</i> .....                    | <b>256</b> , 257                                         |
| <i>moosak paliensis</i> .....             | 52                                                       |
| <i>neglecta</i> .....                     | 196                                                      |
| <i>neglectus</i> .....                    | 91                                                       |
| <i>octoplicata?</i> .....                 | 232                                                      |
| <i>paradoxus</i> .....                    | 58                                                       |
| <i>perextensus</i> .....                  | <b>58</b>                                                |
| <i>perlammellosus</i> .....               | 57                                                       |
| <i>pennatus</i> .....                     | <b>250</b>                                               |
| <i>planoconvexa</i> .....                 | 26, 274                                                  |
| <i>propinquus</i> .....                   | 61                                                       |
| <i>radiata</i> .....                      | 148                                                      |
| <i>rocky-montani</i> .....                | <b>243</b> , 245                                         |
| <i>rocky montanus</i> .....               | 131                                                      |
| <i>solidirostris</i> .....                | <b>116</b>                                               |

|                                             | Page.                                             |
|---------------------------------------------|---------------------------------------------------|
| <i>Spirifer sphakena</i> .....              | <b>225</b>                                        |
| (Spiriferina) <i>cristata</i> .....         | 196                                               |
| <i>scobina</i> .....                        | 94                                                |
| <i>pulcher</i> .....                        | 91                                                |
| <i>striatus</i> .....                       | 130, 131, 243                                     |
| var. <i>triplicatus</i> .....               | 243                                               |
| <i>strigosus</i> .....                      | 94                                                |
| <i>subcardiiformis</i> .....                | 165                                               |
| <i>suborbicularis</i> .....                 | 91                                                |
| <i>subundiferus</i> .....                   | <b>58</b>                                         |
| <i>sulcifera</i> .....                      | <b>256</b> , 257                                  |
| <i>textus</i> .....                         | 149                                               |
| <i>trigonalis</i> .....                     | 196                                               |
| (Trigonotreta) <i>argentarius</i> .....     | <b>108</b>                                        |
| <i>biplicatus</i> .....                     | 89                                                |
| <i>cameratus</i> .....                      | 169                                               |
| <i>opinus</i> .....                         | 90                                                |
| <i>piñonensis</i> .....                     | <b>65</b> , 108                                   |
| <i>scobina</i> .....                        | 109                                               |
| <i>striatiformis</i> .....                  | 89                                                |
| <i>strigosus</i> .....                      | 108                                               |
| <i>texanus</i> .....                        | <b>68</b>                                         |
| ? <i>texanus</i> .....                      | 246                                               |
| <i>triplicata</i> .....                     | <b>232</b>                                        |
| <i>utahensis</i> .....                      | 94, 108                                           |
| <i>vespertina</i> .....                     | 225                                               |
| <i>Spirifera</i> .....                      | 193, 196, 235                                     |
| — ? .....                                   | 193, 235                                          |
| <i>alba-pinensis</i> .....                  | <b>235</b>                                        |
| <i>centronata</i> .....                     | 235                                               |
| <i>disjuncta</i> .....                      | 193                                               |
| <i>englemanni</i> .....                     | <b>22</b> , 193                                   |
| <i>macra</i> .....                          | <b>22</b>                                         |
| (Martinia) <i>glabra</i> .....              | 193                                               |
| var. <i>nevadensis</i> .....                | 193                                               |
| <i>norwoodi</i> .....                       | <b>22</b>                                         |
| <i>parryana</i> .....                       | 193                                               |
| <i>piñonensis</i> .....                     | 319                                               |
| <i>pulchra</i> .....                        | <b>22</b>                                         |
| <i>ruricosta</i> .....                      | 193                                               |
| <i>scobina</i> .....                        | <b>22</b>                                         |
| <i>setigera</i> .....                       | 235                                               |
| (Spiriferina?) <i>alia</i> .....            | <b>236</b>                                        |
| <i>striata</i> .....                        | 235                                               |
| <i>varicosa</i> .....                       | 193                                               |
| <i>Spiriferida</i> .....                    | 31, 62, 108, 169                                  |
| <i>Spiriferina</i> .....                    | 30, 73, 109, 118, 127, 131,<br>178, 196, 236, 257 |
| — ? .....                                   | 30, 109                                           |
| <i>billingsii</i> .....                     | <b>256</b> , 257                                  |
| <i>homfrayi?</i> .....                      | 236                                               |
| <i>kentuckensis</i> .....                   | 52, 73, 131, 178                                  |
| (Martinia) <i>glabra</i> .....              | 193                                               |
| <i>octoplicata</i> .....                    | 131                                               |
| <i>pulchra</i> .....                        | 169                                               |
| <i>spinosa</i> var. <i>campestris</i> ..... | 127                                               |
| <i>subtexta</i> .....                       | <b>119</b>                                        |
| <i>Spirigera</i> .....                      | 127, 130, 132                                     |
| <i>Spirigera</i> — ? .....                  | 20                                                |
| <i>monticola</i> .....                      | <b>127</b> , 130                                  |
| <i>obmaxima</i> .....                       | 130                                               |
| <i>planosulcata</i> .....                   | 132                                               |
| <i>subtilita</i> .....                      | 20, 132                                           |
| <i>Spironema</i> .....                      | 48, 163                                           |
| <i>bella</i> .....                          | 48                                                |





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|                                             | Page.                                     |                                             | Page                                                |
|---------------------------------------------|-------------------------------------------|---------------------------------------------|-----------------------------------------------------|
| <i>Tellina occidentalis</i> .....           | 243                                       | <i>Terebratulina mormonii</i> .....         | <b>243</b>                                          |
| ocoyana .....                               | <b>212</b> , 214                          | nitens .....                                | 49, <b>206</b>                                      |
| (Cene?) subscitula .....                    | 100                                       | perinflata .....                            | <b>257</b>                                          |
| pedro .....                                 | <b>211</b>                                | plano-sulcata .....                         | 243                                                 |
| pedroana .....                              | 213                                       | rocky montana .....                         | <b>243</b>                                          |
| (Peronæa?) equilateralis .....              | 100                                       | royssii .....                               | 243                                                 |
| scitula .....                               | 100                                       | semisimplex .....                           | <b>146</b> , 162                                    |
| plana .....                                 | 220                                       | subtilita .....                             | <b>232</b> , 233, 243, 253, 255, 274                |
| prouti .....                                | <b>15</b>                                 | uta .....                                   | <b>243</b>                                          |
| scitula .....                               | <b>15</b>                                 | utah .....                                  | <b>255</b>                                          |
| subelliptica .....                          | <b>15</b>                                 | wacoensis .....                             | 218                                                 |
| subscitula .....                            | <b>70</b>                                 | wilmingtonensis .....                       | 220                                                 |
| subtortuosa .....                           | <b>16</b>                                 | <i>Terebratulidæ</i> .....                  | 30, 121, 132, 265                                   |
| syriaca .....                               | <b>207</b> , 299                          | <i>Terebratulina atlantica</i> .....        | 265                                                 |
| <i>Tellinella</i> .....                     | 100                                       | floridana .....                             | 265                                                 |
| <i>Tellinidæ</i> .....                      | 100, 111, 269                             | lachryma .....                              | 265                                                 |
| <i>Tellinides</i> .....                     | 160                                       | <i>Terebrispira</i> .....                   | 103                                                 |
| <i>Tellinomya</i> .....                     | 55, 79, 190                               | <i>Teredidæ</i> .....                       | 101, 270, 272                                       |
| alta .....                                  | 55                                        | <i>Teredo</i> .....                         | 101, 270, 272                                       |
| contracta .....                             | 190                                       | emacerata .....                             | <b>272</b>                                          |
| ? hamburgensis .....                        | <b>190</b>                                | globosa .....                               | <b>18</b> , 101                                     |
| ? obliqua .....                             | 79                                        | irregularis .....                           | 270                                                 |
| protensa .....                              | <b>232</b>                                | selliformis .....                           | <b>21</b> , 101                                     |
| ventricosa .....                            | 55                                        | substriata .....                            | 206                                                 |
| <i>Tellinula</i> .....                      | 100                                       | tibialis .....                              | 270                                                 |
| <i>Temnochilus</i> .....                    | 65, 104                                   | <i>Tessarolax</i> .....                     | 158                                                 |
| <i>Tenea</i> .....                          | 269                                       | hitzi .....                                 | <b>158</b>                                          |
| pinguis .....                               | 269                                       | <i>Testacea</i> .....                       | 206                                                 |
| <i>Tentaculites</i> .....                   | 39, 56, 138, 195                          | <i>Tetrabranchiata</i> .....                | 33, 35, 103, 132, 135, 263, 265                     |
| attenuatus .....                            | 195                                       | <i>Tetradecapoda</i> .....                  | 36, 46, 61, 90                                      |
| bellulus .....                              | 195                                       | <i>Tenthidæ</i> .....                       | 105                                                 |
| gracilistriatus .....                       | 195                                       | <i>Textularia phyllodes</i> .....           | 47                                                  |
| hoyti .....                                 | <b>138</b>                                | <i>Thaleops</i> ? .....                     | 248                                                 |
| oswegoensis .....                           | <b>39</b> , 56                            | <i>Thallogenes</i> .....                    | 128                                                 |
| scalariformis .....                         | 195                                       | <i>Thaumastus</i> .....                     | 106, 161                                            |
| sterlingensis .....                         | <b>39</b> , 56                            | limnæformis .....                           | 106, 161, 169                                       |
| tenuistriatus .....                         | <b>39</b> , 56                            | <i>Theca</i> .....                          | 28, 31                                              |
| <i>Terebra</i> .....                        | 237                                       | gregaria .....                              | 31                                                  |
| plicifera .....                             | <b>237</b>                                | lanceolata .....                            | 226                                                 |
| <i>Terebratella</i> .....                   | 265                                       | (Pugiunculus) gregarea .....                | <b>28</b>                                           |
| plicata .....                               | 265                                       | <i>Thecia ramosa</i> .....                  | 102                                                 |
| vanuxemi .....                              | 265                                       | <i>Thecosmata</i> .....                     | 31                                                  |
| <i>Terebratula</i> .....                    | 30, 73, 85, 130, 132, 146, 154, 162, 178, | <i>Thetis</i> .....                         | 100, 264                                            |
| 196, 209, 218, 233, 235, 236, 257, 259, 265 |                                           | ? circularis .....                          | 100, 264                                            |
| — ? .....                                   | 30, 206, 225                              | <i>Thracia</i> .....                        | 34, 92, 100, 151, 158, 215, 216, 259, 261, 262, 264 |
| amygdala .....                              | <b>223</b> , 225                          | ? arcuata .....                             | <b>21</b> , 34                                      |
| augusta .....                               | 146, 162, <b>236</b>                      | (Corimya) grinnelli .....                   | <b>259</b>                                          |
| bovens .....                                | 85                                        | gracilis .....                              | 100                                                 |
| bovidens .....                              | 73, 178                                   | mactropis .....                             | <b>215</b> , 216                                    |
| burlingtonensis .....                       | <b>116</b>                                | myæformis .....                             | <b>151</b> , 158                                    |
| choctawensis .....                          | 218, <b>255</b>                           | ? occidentalis .....                        | <b>17</b> , 92                                      |
| (Dielasma) bovidens .....                   | 132                                       | ? prouti .....                              | 101                                                 |
| burlingtonensis .....                       | 130                                       | subgracilis .....                           | <b>261</b> , 264                                    |
| elongata .....                              | <b>223</b> , 225, 257                     | ? sublevis .....                            | <b>21</b> , 34, 262                                 |
| formosa .....                               | 154                                       | ? subtortuosa .....                         | 100                                                 |
| harlani .....                               | 265                                       | subtruncata .....                           | <b>17</b> , 92                                      |
| hastata .....                               | 196                                       | trapezoides .....                           | <b>205</b>                                          |
| helenæ .....                                | <b>259</b>                                | <i>Thyatira</i> (?) bisecta .....           | 50                                                  |
| hermonensis .....                           | <b>209</b>                                | <i>Tiara humerosa</i> .....                 | 221                                                 |
| humboldtensis .....                         | 236                                       | <i>Tinoporus (Orbitolina) texanus</i> ..... | 47                                                  |
| lachryma .....                              | 222                                       | <i>Tornatella elliptica</i> .....           | 50                                                  |
| leonensis .....                             | <b>220</b>                                | <i>Tornatella impressa</i> .....            | 220                                                 |
| marcyi .....                                | 255                                       | <i>Toxaster elegans</i> .....               | 233                                                 |
| mexicana .....                              | <b>233</b>                                | texanus .....                               | 233                                                 |
| millepunctata .....                         | 20, <b>233</b>                            | <i>Toxoglossa</i> .....                     | 134                                                 |

|                          | Page.                                         |                                   | Page.                 |
|--------------------------|-----------------------------------------------|-----------------------------------|-----------------------|
| Trachycardium .....      | 99                                            | Tritonidae .....                  | 102                   |
| Trachyceras .....        | 110, 239                                      | Tritonidea .....                  | 103                   |
| judicarium .....         | 110, 239                                      | Tritonifusus migrans .....        | 50                    |
| var. subasperum .....    | 110                                           | ? tenuilineatus .....             | 49                    |
| whitneyi .....           | 110, 239                                      | Tritonium diegoensis .....        | 222                   |
| Trachyceratidae .....    | 110, <b>239</b>                               | Trochactæon .....                 | 29                    |
| Trachydomia .....        | 46                                            | Trochactæonina .....              | 29                    |
| Trachytriton .....       | 49, 102                                       | Trochidae .....                   | 102, 180, 264         |
| vinculum .....           | 49, 102                                       | Trochita .....                    | 212, 214, 217         |
| Trapezium .....          | 260, 262                                      | antiqua .....                     | <b>67</b>             |
| bellefourchensis .....   | <b>260</b> , 262                              | carbonaria .....                  | <b>40</b>             |
| miconema .....           | <b>76</b> , 113                               | costellata .....                  | <b>217</b>            |
| subequalis .....         | <b>260</b> , 262                              | diegoana .....                    | <b>212</b> , 214      |
| truncatum .....          | 143                                           | trochiformis .....                | 221                   |
| Trematis .....           | 126, 129                                      | Trochoceras .....                 | 39, 79                |
| pannulus .....           | <b>126</b> , 129                              | baeri .....                       | <b>39</b> , 79        |
| Trematocrinus .....      | 23, 42                                        | Trochonema .....                  | 55, 80                |
| fiscellus .....          | <b>23</b>                                     | tricarinata .....                 | <b>67</b> , 80        |
| Trematodiscus .....      | <b>27</b> , 42, 104                           | umbilicata .....                  | 55                    |
| Trematospira .....       | 57, 193                                       | Trochus .....                     | 180                   |
| ? imbricata .....        | <b>57</b>                                     | lenticularis ? .....              | 248                   |
| infrequens .....         | <b>193</b>                                    | (Oxysteles) euryostomus .....     | <b>180</b>            |
| Triarthrus becki .....   | 187                                           | Tropidina .....                   | 35, 107               |
| Trichopteris .....       | <b>231</b>                                    | Tropidiscus .....                 | 106                   |
| filamentosa .....        | <b>231</b>                                    | Tropidocardium .....              | 99                    |
| gracilis .....           | <b>231</b>                                    | Tropidoleptus .....               | 58                    |
| Trigonarca .....         | 98, 267                                       | carinatus .....                   | 58                    |
| (Breviarca) exigua ..... | 98                                            | Tuba ? bella .....                | 48                    |
| ? salinænsis .....       | 98                                            | Tubicola .....                    | 35, 105, 135          |
| ? siouxensis .....       | 98                                            | Tubipora lamellosa .....          | <b>217</b>            |
| cuneiformis .....        | 267                                           | Tubulostium dickhanti .....       | 151                   |
| transversa .....         | 267                                           | Tudicola ? dakotensis .....       | 49                    |
| Trigonatæ .....          | 34                                            | (Pyropsis) bairdi .....           | 49                    |
| Trigonella .....         | 100                                           | Tulotoma .....                    | 138, 162              |
| Trigonellites .....      | 35                                            | thompsoni .....                   | <b>138</b> , 162, 169 |
| Trigonia .....           | 30, 33, 92, 133, 164, 207, 209, 218, 236, 268 | Turbinolia .....                  | 218                   |
| alta .....               | <b>207</b>                                    | goldfussii .....                  | 229                   |
| americana .....          | 164                                           | stokesii .....                    | 220                   |
| cerulea .....            | <b>268</b>                                    | texana .....                      | <b>218</b>            |
| conradi .....            | <b>23</b> , 23                                | Turbo .....                       | 227, 258              |
| crenulata .....          | 255                                           | glabra .....                      | 50                    |
| cuneiformis .....        | <b>207</b>                                    | guadalupensis .....               | <b>258</b>            |
| distans .....            | <b>210</b>                                    | helicinus ? .....                 | 258                   |
| emoryi .....             | 218                                           | lineatus .....                    | 221                   |
| eufaulensis .....        | 268                                           | mudgæus .....                     | <b>70</b>             |
| evansana .....           | <b>17</b>                                     | nebrascensis .....                | <b>14</b>             |
| evansi .....             | 92                                            | paludinaeformis .....             | <b>231</b>            |
| lorentii .....           | <b>227</b>                                    | tenuilineata .....                | 48                    |
| montanaensis .....       | 164                                           | tenuilincatus .....               | <b>14</b>             |
| mortoni .....            | <b>268</b>                                    | texanus .....                     | <b>258</b>            |
| pandicosta .....         | <b>30</b>                                     | Turbonilla .....                  | 134, 143              |
| quadrangularis .....     | <b>236</b>                                    | (Chemnitzia?) coalvillensis ..... | <b>77</b> , 143       |
| texana .....             | <b>218</b>                                    | melanopsis .....                  | 134                   |
| syriaca .....            | <b>207</b> , 209                              | maclurii .....                    | 220                   |
| Trigoniidae .....        | 30, 32, 33, 111, 132, 133, 268                | Turnus .....                      | 101, 137              |
| Trigonotreta .....       | 31, 57, 58, 89                                | (Gonioclasma) stimpsoni .....     | 101                   |
| Trilobita .....          | 31, 39, 90, 179, 260, 261                     | sphenoideus .....                 | <b>137</b>            |
| Trilobites .....         | 28, 148, 149, 249                             | (Xylophagella) elegantulus .....  | 101                   |
| Trimerella .....         | 80                                            | Turricula .....                   | 195                   |
| grandis .....            | 80                                            | Turritites .....                  | <b>49</b>             |
| ohioensis .....          | 80                                            | cheyennensis .....                | 49                    |
| Triplesia .....          | 80, 190                                       | (Helicoceras) cochleatus .....    | <b>18</b>             |
| calcifera .....          | 190                                           | ? umbilicatus .....               | <b>18</b>             |
| ortoni .....             | 80                                            | Turris .....                      | 103                   |
| Triton .....             | 216                                           | minor .....                       | 103                   |



|                                             | Page.                             |
|---------------------------------------------|-----------------------------------|
| Unio meeki.....                             | 139, 159, 170                     |
| mendax.....                                 | 139, 168                          |
| nasutoides.....                             | 272                               |
| nucalis.....                                | 18, 34, 167                       |
| penultimus.....                             | 167                               |
| petrinus.....                               | 137                               |
| prenodontoides.....                         | 272                               |
| primævus.....                               | 139, 160, 168                     |
| priseus.....                                | 15, 105, 160, 168                 |
| proavitus.....                              | 139, 160, 168                     |
| propheticus.....                            | 137, 160, 168                     |
| radiatoides.....                            | 272                               |
| rectoides.....                              | 272                               |
| roanokoides.....                            | 272                               |
| senectus.....                               | 139, 160, 168                     |
| shoshonensis.....                           | 137, 159, 170                     |
| stewardi.....                               | 136, 167                          |
| subrotundoides.....                         | 272                               |
| subspatulatus.....                          | 18, 105, 160, 168                 |
| tellinoides.....                            | 170                               |
| terra-rubra.....                            | 88                                |
| vetustus.....                               | 22, 95, 112, 135, 160, 168        |
| washakiensis.....                           | 70, 159, 170                      |
| Unionidæ.....                               | 34, 98, 105, 112, 135, 139, 272   |
| Unionopsis.....                             | 99                                |
| Uperocerinus.....                           | 41                                |
| Urostheneæ.....                             | 224                               |
| australis.....                              | 224                               |
| V.                                          |                                   |
| Valvata.....                                | 35, 107, 158, 162                 |
| ? montanaensis.....                         | 107, 162, 169                     |
| nana.....                                   | 77, 158, 167                      |
| parvula.....                                | 16, 107, 162                      |
| scabrida.....                               | 167                               |
| subumbilicata.....                          | 107, 162, 169                     |
| ? (Tropidina) scabrida.....                 | 35                                |
| Valvatidæ.....                              | 35, 107                           |
| Vanikora.....                               | 102, 264                          |
| ambigua.....                                | 48, 102, 264                      |
| diegoana.....                               | 50, 221                           |
| Vanikoridæ.....                             | 102                               |
| Vanikoropsis.....                           | 102, 259                          |
| tuomeyana.....                              | 102, 259                          |
| Vanuxemia.....                              | 54                                |
| dixonensis.....                             | 41                                |
| ? dixonensis.....                           | 54                                |
| Velatella.....                              | 134, 141, 158, 161                |
| Veleda.....                                 | 269, 271                          |
| equilatera.....                             | 271                               |
| lintea.....                                 | 269                               |
| nasuta.....                                 | 271                               |
| telinoides.....                             | 269                               |
| transversa.....                             | 269                               |
| Veloritina.....                             | 99, 135, 137, 160                 |
| Venericardia (Cardiocardites) carinata..... | 50                                |
| monilicasta.....                            | 50                                |
| subtenta.....                               | 50                                |
| occidentalis.....                           | 50                                |
| (Pteromeris) abbreviata.....                | 50                                |
| radians.....                                | 50                                |
| Veneridæ.....                               | 100, 111, 260, 262, 264, 269, 271 |
| Veniella.....                               | 99, 134, 264, 268, 271            |
| conradi.....                                | 99, 268                           |
| decisa.....                                 | 269                               |

|                                                  | Page.                            |                                                | Page.                                |
|--------------------------------------------------|----------------------------------|------------------------------------------------|--------------------------------------|
| <i>Veniella</i> elevata.....                     | 269                              | <i>Viviparus</i> leidyi.....                   | 107, 162, 169                        |
| goniophora.....                                  | 99, 134                          | var. formosus.....                             | 107, 169                             |
| humilis.....                                     | 264                              | paludinaeformis.....                           | 170                                  |
| inflata.....                                     | 269                              | panguit-chensis.....                           | 137, 169                             |
| mortoni.....                                     | 99                               | peculiaris.....                                | 107, 162, 169                        |
| rhomboidea.....                                  | 271                              | plicapressus.....                              | 138, 162, 169                        |
| subovalis.....                                   | 268                              | prudentius.....                                | 162, 169                             |
| subtumida.....                                   | 99                               | prudentia.....                                 | 141                                  |
| trapezoidea.....                                 | 269                              | retusus.....                                   | 107, 162, 169                        |
| trigona.....                                     | 269                              | reynoldsana.....                               | 28                                   |
| (Venilicardia ?) humilis.....                    | 99                               | reynoldsianus.....                             | 107, 162, 169                        |
| <i>Veniellidae</i> .....                         | 264                              | trochiformis.....                              | 107, 135, 162, 169                   |
| <i>Venilia</i> .....                             | 29, 99                           | var.....                                       | 135                                  |
| gabbana.....                                     | 47                               | wyomingensis.....                              | 68, 170                              |
| humilis.....                                     | 47                               | <i>Volsella</i> .....                          | 33, 98, 111, 140, 158, 160, 164, 262 |
| laphami.....                                     | 48                               | attenuata.....                                 | 47, 98                               |
| mortoni.....                                     | 29                               | (Brachydontes) laticostata.....                | 140, 160, 168                        |
| quadrata.....                                    | 47                               | multilinigera.....                             | 158                                  |
| subtumida.....                                   | 48                               | regularis.....                                 | 140, 160, 168                        |
| <i>Venilicardia</i> .....                        | 99                               | concentrico-costellata.....                    | 47                                   |
| <i>Venus</i> .....                               | 207, 208, 217                    | conradi.....                                   | 49                                   |
| — ?.....                                         | 206                              | contracta.....                                 | 50                                   |
| alveata.....                                     | 50                               | cretacea.....                                  | 47                                   |
| althleta.....                                    | 50                               | ducatelli.....                                 | 50                                   |
| angustifrons.....                                | 50, 206                          | formosa.....                                   | 33, 49                               |
| bisecta.....                                     | 50, 206                          | galpiniana.....                                | 98                                   |
| brevilineata.....                                | 50, 206                          | inflata.....                                   | 50                                   |
| ? circularis.....                                | 16, 48                           | julie.....                                     | 47                                   |
| floridana.....                                   | 220                              | meekii.....                                    | 47, 98                               |
| indurata.....                                    | 207                              | (Modiola) formosa.....                         | 262                                  |
| latilirata.....                                  | 50                               | (Modiolina) platynota.....                     | 164                                  |
| lamellifera.....                                 | 206                              | pedernalis.....                                | 47                                   |
| meekiana.....                                    | 48                               | pertenus.....                                  | 33, 49, 262                          |
| ripleyana.....                                   | 48                               | saffordi.....                                  | 47                                   |
| pajaroana.....                                   | 217                              | scalprum var. isonema.....                     | 111                                  |
| penita.....                                      | 220                              | [?] spinigera.....                             | 50                                   |
| perovalis.....                                   | 208                              | subimbricata.....                              | 164                                  |
| securis.....                                     | 256                              | <i>Volutilithes</i> .....                      | 211, 219                             |
| (Trigonia) tantilla.....                         | 50                               | <i>Voluta</i> ( <i>l</i> ) <i>lithes</i> ..... | 213                                  |
| unionides.....                                   | 49                               | californiana.....                              | 211, 213                             |
| vespertina.....                                  | 219                              | sayana.....                                    | 219                                  |
| syriaca.....                                     | 207                              | <i>Volutilithes</i> bella.....                 | 48                                   |
| <i>Vermes</i> .....                              | 135, 138, 144, 153, 165          | biplicata.....                                 | 49                                   |
| <i>Vermetus</i> rotula.....                      | 49                               | nasuto.....                                    | 49                                   |
| <i>Vestigia</i> .....                            | 129                              | <i>Volviceramus</i> .....                      | 97                                   |
| <i>Vetelletia</i> ( <i>Ancylus</i> ) minuta..... | 16                               | <i>Vorticifex</i> .....                        | 112                                  |
| <i>Vetericardia</i> .....                        | 268                              |                                                |                                      |
| crenulirata.....                                 | 268                              |                                                |                                      |
| octolirata.....                                  | 268                              |                                                |                                      |
| <i>Vitrina</i> .....                             | 106, 161                         |                                                |                                      |
| obliqua.....                                     | 17, 169                          |                                                |                                      |
| ? obliqua.....                                   | 106, 161                         |                                                |                                      |
| <i>Vitrinidae</i> .....                          | 106, 107                         |                                                |                                      |
| <i>Vivipara</i> .....                            | 28                               |                                                |                                      |
| <i>Viviparidae</i> .....                         | 35, 107, 112, 135                |                                                |                                      |
| <i>Viviparus</i> .....                           | 35, 107, 112, 135, 137, 141, 162 |                                                |                                      |
| ? — ?.....                                       | 136                              |                                                |                                      |
| conradi.....                                     | 107, 112, 162, 169               |                                                |                                      |
| couesi.....                                      | 141, 162, 168                    |                                                |                                      |
| gilli.....                                       | 35                               |                                                |                                      |
| gillianus.....                                   | 167                              |                                                |                                      |
| glaber.....                                      | 50                               |                                                |                                      |
| ioniensis.....                                   | 136, 170                         |                                                |                                      |
| leai.....                                        | 107, 162, 169                    |                                                |                                      |

|                                       | Y.                               | Page. |                                   | Page                                |
|---------------------------------------|----------------------------------|-------|-----------------------------------|-------------------------------------|
| <i>Yoldia</i> .....                   | 33, 44, 73, 90, 98, 263          |       | <i>Zaphrentis priscus</i> .....   | 167                                 |
| <i>evansi</i> .....                   | 98, 263                          |       | <i>rafinesquii</i> .....          | 165                                 |
| <i>impressa</i> .....                 | 49                               |       | <i>recta</i> .....                | <b>62</b>                           |
| <i>levistriata</i> .....              | 44                               |       | <i>spinulifera</i> .....          | 125                                 |
| <i>microdonta</i> .....               | <b>70</b> , 98                   |       | <i>stansburyi</i> .....           | 109, <b>232</b> , 243               |
| (Palaemonio?) <i>carbonaria</i> ..... | <b>69</b> , 90                   |       | <i>Zaptychius</i> .....           | <b>188</b> , 197                    |
| <i>scitula</i> .....                  | 98                               |       | <i>carbonaria</i> .....           | 180, <b>188</b> , 197               |
| <i>stevensoni</i> .....               | <b>69</b> , 90                   |       | <i>Zeacrinus</i> .....            | 23, 42, 43, 45, 72, 82, 84, 85, 118 |
| <i>subscitula</i> .....               | 33, 73                           |       | ? <i>armiger</i> .....            | <b>64</b>                           |
| <i>ventricosa</i> .....               | 98                               |       | <i>crassus</i> .....              | 45                                  |
|                                       |                                  |       | <i>discus</i> .....               | <b>23</b> , 45                      |
|                                       |                                  |       | (Hyreionocrinus?) <i>acantho-</i> |                                     |
|                                       |                                  |       | <i>porus</i> .....                | <b>64</b> , 87                      |
|                                       |                                  |       | ? <i>mucrospinus</i> .....        | 72                                  |
| <i>Zamites occidentalis</i> .....     | <b>246</b>                       |       | <i>perangulatus</i> .....         | <b>118</b>                          |
| <i>Zaphrentis</i> .....               | 58, 62, 109, 117, 119, 130, 131, |       | <i>planobrachiatus</i> .....      | <b>23</b> , 43                      |
| .....                                 | 148, 155, 165, 177               |       | <i>sacculus</i> .....             | <b>118</b>                          |
| —— ? .....                            | 58, 130                          |       | var. <i>concinus</i> .....        | 118                                 |
| <i>acutus</i> .....                   | <b>117</b>                       |       | <i>troostanus</i> .....           | <b>23</b> , 42                      |
| <i>calceola</i> .....                 | 165                              |       | <i>Zellinidæ</i> .....            | 261                                 |
| <i>cylindrica</i> .....               | 243                              |       | <i>Ziphosura</i> .....            | 61                                  |
| <i>elliptica</i> .....                | <b>119</b> , 165                 |       | <i>Zoophyta</i> .....             | 55, 56, 57, 58, 119, 257            |
| <i>excentrica</i> .....               | <b>109</b> , 131                 |       | <i>Zygospira</i> .....            | 57, 78                              |
| <i>gibsoni</i> .....                  | <b>177</b>                       |       | <i>cincinnatiensis</i> .....      | 78                                  |
| <i>glans</i> .....                    | 119                              |       | <i>headi</i> .....                | 79                                  |
| <i>haysii</i> .....                   | <b>36</b>                        |       | <i>modesta</i> .....              | 78                                  |
| <i>mcfarlanei</i> .....               | <b>62</b>                        |       | <i>subconcava</i> .....           | 57                                  |
| ? <i>multilamella</i> .....           | 109, <b>232</b>                  |       |                                   |                                     |

# GENERAL INDEX.

| A.                              |  | Page.                                         |                                     |  | Page.                                                                                                                               |
|---------------------------------|--|-----------------------------------------------|-------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------|
| Albert, J. W.                   |  | 273                                           | Birds of Iowa                       |  | 123                                                                                                                                 |
| Africa                          |  | 156                                           | Bismarek                            |  | 176                                                                                                                                 |
| Agua doce molluscos cretaceos.  |  | 181                                           | Bitter Creek                        |  | 145                                                                                                                                 |
| Alabama                         |  | 17, 96                                        | fossils.                            |  | 77                                                                                                                                  |
| Alaska fossils                  |  | 176                                           | group                               |  | 141                                                                                                                                 |
| Albino flowers.                 |  | 124                                           | Black Buttes, Wyoming               |  | 145                                                                                                                                 |
| Albuquerque                     |  | 241                                           | Black Hills                         |  | 18, 157, 261                                                                                                                        |
| Allen, J. A.                    |  | 123                                           | fossils.                            |  | 259                                                                                                                                 |
| Alluvium                        |  | 74, 75                                        | Black River fossils                 |  | 231                                                                                                                                 |
| America (North)                 |  | 49, 139, 141, 147, 166, 167,<br>179, 198, 242 | Black slate                         |  | 25                                                                                                                                  |
| America (Northwestern)          |  | 144, 180                                      | Blake, W. P.                        |  | 210, 242                                                                                                                            |
| fossils of.                     |  | 217                                           | Blood, circulation of.              |  | 140                                                                                                                                 |
| Amérique                        |  | 125                                           | Braintree argillites fauna          |  | 199                                                                                                                                 |
| Andes fossil ammonite           |  | 227                                           | Branchial appendages of Trilobites. |  | 185                                                                                                                                 |
| Archimedes limestone            |  | 75                                            | Brazil                              |  | 181                                                                                                                                 |
| Arizona                         |  | 128, 146, 167, 188, 241, 244                  | Brazilian National Museum           |  | 181                                                                                                                                 |
| Arkansas                        |  | 153, 157, 241, 242                            | Bridger group                       |  | 145                                                                                                                                 |
| River                           |  | 241, 242                                      | British America                     |  | 171                                                                                                                                 |
| Artesian wells                  |  | 156, 157, 256, 257, 274                       | North America                       |  | 147                                                                                                                                 |
| Arthur, Mr.                     |  | 146                                           | British Provinces                   |  | 242                                                                                                                                 |
| Asahey's Fork, Utah             |  | 145                                           | Brownville                          |  | 71                                                                                                                                  |
| Aspinwall                       |  | 71                                            | Bryan's Pass                        |  | 256                                                                                                                                 |
| Astoria fossils.                |  | 205                                           | Bull-snake, (Pityophis).            |  | 175                                                                                                                                 |
| Oregon                          |  | 205, 206                                      | Burlington                          |  | 116, 117                                                                                                                            |
| Atchison Landing                |  | 71                                            | beds.                               |  | 116                                                                                                                                 |
| Atlantic supracretaceous        |  | 205                                           | group fossils.                      |  | 42, 59, 81                                                                                                                          |
| Tertiary fossils.               |  | 205                                           | C.                                  |  |                                                                                                                                     |
| Australia                       |  | 223, 224                                      | Cache à la poudre                   |  | 145                                                                                                                                 |
| Azoic                           |  | 123                                           | Calceiferous fossils.               |  | 186, 231                                                                                                                            |
| B.                              |  |                                               | California.                         |  | 29, 35, 152, 180, 241, 242, 244                                                                                                     |
| Bailey, J. W., writings of      |  | 203, 273                                      | desert.                             |  | 244                                                                                                                                 |
| Bear Creek                      |  | 146                                           | fossils                             |  | 210, 212, 216                                                                                                                       |
| River                           |  | 76, 145                                       | (North)                             |  | 17, 231                                                                                                                             |
| fossils                         |  | 95, 112                                       | (Southern)                          |  | 244                                                                                                                                 |
| Laramie fossils                 |  | 168                                           | Tertiary fossils                    |  | 215                                                                                                                                 |
| Beckett's                       |  | 205                                           | Cambrian                            |  | 188                                                                                                                                 |
| Beekwith, E. S.                 |  | 203                                           | faunas                              |  | 198                                                                                                                                 |
| Bell County, Texas              |  | 146                                           | fossils.                            |  | 189                                                                                                                                 |
| Bellevue                        |  | 71                                            | middle                              |  | 199                                                                                                                                 |
| Benner's fossil shells          |  | 205                                           | Trilobites                          |  | 199                                                                                                                                 |
| Bennett's mill                  |  | 71                                            | Camden clays                        |  | 265                                                                                                                                 |
| Berthoud, E. S.                 |  | 146                                           | company, New Jersey                 |  | 272                                                                                                                                 |
| Bexar County, Texas             |  | 146                                           | Canada                              |  | 188                                                                                                                                 |
| Bibliography.                   |  | 141, 147                                      | de las Uvas                         |  | 244                                                                                                                                 |
| Big Spring, Iowa                |  | 248                                           | (Geol. Surv.)                       |  | 159                                                                                                                                 |
| Bijou Creek, Colorado           |  | 145                                           | Canadian period.                    |  | 126, 129                                                                                                                            |
| Biographic sketch of F. B. Meek |  | 11                                            | Cañon Park, Colorado                |  | 145                                                                                                                                 |
| Birds                           |  | 124                                           | Carboniferous.                      |  | 13, 18, 21, 23, 31, 32, 35, 38, 41, 59, 63,<br>64, 69, 74, 75, 76, 81, 92, 108, 116, 123,<br>126, 127, 128, 130, 131, 136, 148, 150 |
| Bird's eye fossils              |  | 231                                           | crinoides.                          |  | 54                                                                                                                                  |



|                                                   | Page.                                                                                                                                                      |                                              | Page.                                                                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Carboniferous fossils .....                       | 19, 22, 24, 29, 40, 59, 66,<br>70, 71, 92, 94, 109, 117,<br>118, 136, 144, 146, 147, 150,<br>151, 163, 164, 167, 175, 189,<br>196, 233, 241, 246, 255, 258 | Cretaceous fossils .....                     | 21, 22, 23, 27, 28, 66, 70, 71, 76, 93,<br>93, 95, 96, 111, 136, 142, 145, 147,<br>157, 158, 167, 180, 214, 218, 220,<br>222, 233, 243, 255, 256, 260, 263 |
| (lower) .....                                     | 147                                                                                                                                                        | invertebrates .....                          | 181                                                                                                                                                        |
| fossils .....                                     | 81, 91, 116, 235, 243                                                                                                                                      | Iowa .....                                   | 120                                                                                                                                                        |
| Ostreidae .....                                   | 172                                                                                                                                                        | (lower) .....                                | 19                                                                                                                                                         |
| shells .....                                      | 223                                                                                                                                                        | ostreidae .....                              | 172                                                                                                                                                        |
| cuppet .....                                      | 147                                                                                                                                                        | Crow Creek, Colorado .....                   | 145                                                                                                                                                        |
| Carol, Montana .....                              | 256                                                                                                                                                        | Croxton, Mr. .....                           | 71                                                                                                                                                         |
| Catalogue .....                                   | 210                                                                                                                                                        | Cyathophycus, nature of .....                | 187                                                                                                                                                        |
| Cat, domestic instinct in .....                   | 175                                                                                                                                                        |                                              |                                                                                                                                                            |
| Cedar Bluff .....                                 | 71                                                                                                                                                         | D.                                           |                                                                                                                                                            |
| Cenozoic .....                                    | 135, 140, 153                                                                                                                                              | Dakota .....                                 | 123, 157, 176, 259, 261                                                                                                                                    |
| Unionidae .....                                   | 140                                                                                                                                                        | group .....                                  | 96, 120                                                                                                                                                    |
| Central Pacific Railroad line fossils .....       | 253                                                                                                                                                        | (Northwestern) .....                         | 171                                                                                                                                                        |
| Cerebro spinal meningitis .....                   | 119                                                                                                                                                        | Dall, W. H. .....                            | 176                                                                                                                                                        |
| Cephalopodes cretaceos .....                      | 181                                                                                                                                                        | Dana, J. D. .....                            | 242                                                                                                                                                        |
| Chalk, organic remains of .....                   | 208                                                                                                                                                        | writings of .....                            | 223                                                                                                                                                        |
| Chazy fossils .....                               | 231                                                                                                                                                        | Danforth Hills, Colorado .....               | 145                                                                                                                                                        |
| limestone fossils .....                           | 186                                                                                                                                                        | Dead Sea .....                               | 206                                                                                                                                                        |
| Check list of fossils, Eocene and Oligocene ..... | 220                                                                                                                                                        | Deer Creek coal field .....                  | 188                                                                                                                                                        |
| Chemung .....                                     | 13, 116                                                                                                                                                    | Denison, Texas .....                         | 146                                                                                                                                                        |
| Chester group fossils .....                       | 44, 84                                                                                                                                                     | Devonian .....                               | 13, 38, 41, 54, 66, 77, 116, 123, 155, 174, 176                                                                                                            |
| Chippewa land district fossils .....              | 248                                                                                                                                                        | fossils .....                                | 22, 57, 65, 94, 108, 118, 148, 167, 189,<br>192, 235                                                                                                       |
| Chouteau limestone .....                          | 75                                                                                                                                                         | Dodd's ranch, Utah .....                     | 145                                                                                                                                                        |
| Chutes River, Oregon .....                        | 229                                                                                                                                                        | Drift .....                                  | 75, 120, 122                                                                                                                                               |
| Cincinnati group .....                            | 37, 68, 69                                                                                                                                                 | glacial .....                                | 171, 176                                                                                                                                                   |
| fossils .....                                     | 55, 77                                                                                                                                                     | Dry Creek (Mexico), Cretaceous fossils ..... | 218                                                                                                                                                        |
| Chilborne .....                                   | 265                                                                                                                                                        | Dutton, C. E. .....                          | 174                                                                                                                                                        |
| Clinton fossils .....                             | 80                                                                                                                                                         |                                              |                                                                                                                                                            |
| group fossils .....                               | 232                                                                                                                                                        | E.                                           |                                                                                                                                                            |
| Coal beds .....                                   | 273                                                                                                                                                        | Echinodermes cretaceos .....                 | 181                                                                                                                                                        |
| measures .....                                    | 17, 36, 50, 53, 61, 75, 88, 121, 149, 155                                                                                                                  | Echo Cañon .....                             | 76                                                                                                                                                         |
| of Europe .....                                   | 128                                                                                                                                                        | Economic geology .....                       | 75                                                                                                                                                         |
| fossils .....                                     | 45, 85, 90, 92, 121, 177, 235, 256                                                                                                                         | Economic geology of Montean County Mis-      |                                                                                                                                                            |
| (upper) .....                                     | 19                                                                                                                                                         | souri .....                                  | 13                                                                                                                                                         |
| United States .....                               | 128                                                                                                                                                        | Ehrenberg, C. G., writings of .....          | 229                                                                                                                                                        |
| Coalville, Utah .....                             | 76, 145                                                                                                                                                    | El Paso .....                                | 241, 242                                                                                                                                                   |
| Coast Range .....                                 | 244                                                                                                                                                        | Cretaceous fossils .....                     | 218                                                                                                                                                        |
| Collett, John .....                               | 148, 154, 174, 177                                                                                                                                         | Emory, Major .....                           | 214                                                                                                                                                        |
| Colorado .....                                    | 128, 136, 141, 145, 116, 153, 157, 159, 244                                                                                                                | Encrinital limestone .....                   | 13, 75                                                                                                                                                     |
| River .....                                       | 188                                                                                                                                                        | Engelman, H. .....                           | 256                                                                                                                                                        |
| (Eastern) .....                                   | 156                                                                                                                                                        | Eocene fossils .....                         | 170, 205, 210, 212, 220                                                                                                                                    |
| group .....                                       | 145                                                                                                                                                        | of Southern States .....                     | 237                                                                                                                                                        |
| (Northwestern) .....                              | 142                                                                                                                                                        | marls .....                                  | 265                                                                                                                                                        |
| of the West .....                                 | 246                                                                                                                                                        | fossils .....                                | 271                                                                                                                                                        |
| Commissioner of Agriculture .....                 | 156                                                                                                                                                        | ostreidae .....                              | 237                                                                                                                                                        |
| Common schools .....                              | 124                                                                                                                                                        | Etats-Unis .....                             | 241                                                                                                                                                        |
| Conchiferous cretaceos .....                      | 181                                                                                                                                                        | Eureka district, Palaeontology of .....      | 188                                                                                                                                                        |
| Cone in cone .....                                | 122                                                                                                                                                        | Europe .....                                 | 141, 147                                                                                                                                                   |
| Conrad, T. A., writings of .....                  | 205                                                                                                                                                        | Evans, Colonel .....                         | 88                                                                                                                                                         |
| Contents, table of .....                          | 5                                                                                                                                                          | Evans, John, and Shumard, B. F. .....        | 255                                                                                                                                                        |
| Cook, G. H. .....                                 | 265                                                                                                                                                        |                                              |                                                                                                                                                            |
| Cooper marble .....                               | 75                                                                                                                                                         | F.                                           |                                                                                                                                                            |
| Cope, E. D. .....                                 | 139, 171, 222                                                                                                                                              | Fair Haven section .....                     | 205                                                                                                                                                        |
| Corniferous fossils .....                         | 80                                                                                                                                                         | Far West .....                               | 128                                                                                                                                                        |
| group fossils .....                               | 57                                                                                                                                                         | Fish house, New Jersey .....                 | 272                                                                                                                                                        |
| Cretaceous .....                                  | 13, 14, 15, 16, 17, 20, 35, 47, 76,<br>96, 108, 123, 125, 127, 128, 133,<br>150, 151, 152, 156, 178, 259, 265                                              | Fœtal hydrocephalus .....                    | 119                                                                                                                                                        |
| corals .....                                      | 146                                                                                                                                                        | Forests .....                                | 142                                                                                                                                                        |
| eastern limit in Iowa .....                       | 125                                                                                                                                                        | Forestry .....                               | 166, 176                                                                                                                                                   |
| (European) .....                                  | 27, 96                                                                                                                                                     | Fort Benton group .....                      | 96                                                                                                                                                         |
|                                                   |                                                                                                                                                            | Clark .....                                  | 17                                                                                                                                                         |
|                                                   |                                                                                                                                                            | Collins, Colorado .....                      | 145                                                                                                                                                        |

|                                              | Page.              |                                           | Page.                                                |
|----------------------------------------------|--------------------|-------------------------------------------|------------------------------------------------------|
| Fort Leavenworth .....                       | 256                | Hall, James, writings of .....            | 231                                                  |
| Pierre group .....                           | 96                 | and Meek, F. B. ....                      | 13                                                   |
| Riley .....                                  | 256                | and Whittfield, R. P. ....                | 233                                                  |
| Smith .....                                  | 241                | Hamilton group fossils .....              | 58                                                   |
| Snelling .....                               | 248                | Harper's Hill, Australia .....            | 223                                                  |
| Tejon .....                                  | 244                | Hartt, C. F. ....                         | 181                                                  |
| Union .....                                  | 141                | collection .....                          | 198                                                  |
| group .....                                  | 96                 | Hawn, F. ....                             | 17                                                   |
| Fortieth parallel, palæontology of .....     | 108                | Hayden, F. V. ....                        | 66, 71, 96                                           |
| Fossil corals .....                          | 223                | Hays, Dr. ....                            | 36, 52                                               |
| leaves .....                                 | 273                | Heilprin, A. ....                         | 172                                                  |
| mollusca .....                               | 180                | Angelo, writings of .....                 | 237                                                  |
| plants .....                                 | 149, 155, 226, 246 | Helderberg .....                          | 52                                                   |
| ridge, Colorado .....                        | 145                | (lower) fossils .....                     | 56                                                   |
| Fox Hill beds .....                          | 27                 | upper .....                               | 13                                                   |
| Hills fossils .....                          | 145                | fossils .....                             | 232                                                  |
| group .....                                  | 96, 145            | Helotes, Texas .....                      | 146                                                  |
| Fremont, J. C. ....                          | 203, 231           | Hersey, J. C. ....                        | 146                                                  |
| French .....                                 | 242                | High Point mine .....                     | 1                                                    |
| Fresh and brackish water deposits fossils .. | 139                | Hilgard, E. W. ....                       | 124                                                  |
| water infusoria, Oregon .....                | 203                | Hilliard, Wyoming .....                   | 145                                                  |
| and land mollusca .....                      | 150                | Hudson River fossils .....                | 231                                                  |
| miocene fossils .....                        | 180                | group .....                               | 157, 175                                             |
| mollusks .....                               | 125, 156           | Hunter, valley of, Australia .....        | 223                                                  |
| paleozoic fossils of Nevada .....            | 188                | Hyatt, A. ....                            | 146                                                  |
| Frontera cretaceous fossils .....            | 218                | Alpheus, writings of .....                | 239                                                  |
| G.                                           |                    | I.                                        |                                                      |
| Galena beds fossils .....                    | 55                 | Idaho .....                               | 76, 146                                              |
| Garter snake .....                           | 142                | (Southeastern) .....                      | 146, 162, 239                                        |
| Gasteropodes cretaceous .....                | 181                | Illawara, Australia .....                 | 223                                                  |
| Gatun, Isthmus of Darien fossils .....       | 216                | Illinois .....                            | 24, 26, 36, 37, 38, 40, 41, 50, 53, 54,              |
| Geinitz, H. B. ....                          | 51                 | 67, 81, 87, 144, 154, 247, 249            |                                                      |
| Genus pyrgulifera .....                      | 180                | palæontology .....                        | 90                                                   |
| Geological survey of Iowa, Wisconsin, and    |                    | survey .....                              | 179                                                  |
| Minnesota .....                              | 249                | Indiana .....                             | 25, 69, 144                                          |
| Geology of North America .....               | 233, 242           | fossils .....                             | 147, 154, 177                                        |
| Georgia .....                                | 152                | Indianapolis .....                        | 124                                                  |
| Glacial rocks of Colorado .....              | 244                | Infusorial deposits, Oregon .....         | 229                                                  |
| Pike's Peak .....                            | 244                | fossils .....                             | 162                                                  |
| Golden City, Colorado .....                  | 145                | Interior states .....                     | 164                                                  |
| Goniatite limestone .....                    | 25                 | Introductory note .....                   | 7                                                    |
| Goode, G. Brown .....                        | 175                | Iowa .....                                | 26, 116, 117, 121, 123, 138, 142, 247, 249, 250, 251 |
| Grand Cañon of the Colorado .....            | 188                | first annual report .....                 | 120                                                  |
| tertiary history of .....                    | 174                | and second annual reports .....           | 122                                                  |
| River .....                                  | 246                | geography of .....                        | 124                                                  |
| Great Plains .....                           | 156, 157           | lakes of .....                            | 122                                                  |
| Prairie region .....                         | 166                | (Northwestern) .....                      | 123                                                  |
| Red Pipestone quarry .....                   | 122                | River .....                               | 248                                                  |
| Salt Lake .....                              | 232                | soils of .....                            | 119                                                  |
| Greeley, Colorado .....                      | 88, 145, 146       | (Southern) .....                          | 120                                                  |
| Green River .....                            | 246                | (Southwestern) .....                      | 120, 123                                             |
| group .....                                  | 145, 171           | geology of .....                          | 120                                                  |
| fossils .....                                | 166                | (Western) .....                           | 123                                                  |
| region .....                                 | 140                | Irish, C. W. ....                         | 123                                                  |
| sand marls .....                             | 265                | Isthmus of Darien, Tertiary fossils ..... | 212, 214                                             |
| Greenland .....                              | 141                | Ives, J. C. ....                          | 247                                                  |
| Grinnell .....                               | 93                 | J.                                        |                                                      |
| Grupo da Bahia .....                         | 181                | Jacun cretaceous fossils .....            | 218                                                  |
| Guthrie County, Iowa .....                   | 123                | Jenney, Walter P. ....                    | 157, 261                                             |
| H.                                           |                    | John Day group .....                      | 180                                                  |
| Hague, Arnold .....                          | 188                | Jordan River .....                        | 206                                                  |
| Haime .....                                  | 52                 | Judith River .....                        | 17, 141                                              |
| Hall, James .....                            | 203                | group .....                               | 96, 139                                              |



|                                              | Page.                           |                                         | Page.                   |
|----------------------------------------------|---------------------------------|-----------------------------------------|-------------------------|
| Nicollet, I. N., writings of .....           | 273                             | Permian .....                           | 19, 32, 187             |
| Niobrara group .....                         | 96                              | fossils .....                           | 256, 257, 274           |
| Nishnabotomy .....                           | 120                             | Permo-carboniferous fossils .....       | 235                     |
| Non-marine fossil mollusca, supplement to .. | 180                             | Petermann, A .....                      | 242                     |
| mollusca .....                               | 167                             | Pike's Peak .....                       | 244                     |
| North American continent biologically con-   |                                 | Plastic clays fossils .....             | 266                     |
| sidered .....                                | 177                             | Plateau Province .....                  | 136                     |
| Northwest .....                              | 17                              | Platte River .....                      | 71                      |
| Northwestern Boundary Commission .....       | 27                              | Plattsmouth .....                       | 71                      |
| localities .....                             | 92                              | Pliocene .....                          | 244                     |
| Nouveau Mexique .....                        | 241                             | fossils .....                           | 170                     |
| Nuevo Leon .....                             | 171                             | ostreidæ .....                          | 238                     |
| O.                                           |                                 | Poblazon .....                          | 273                     |
| Oak Creek, Texas, Cretaceous fossils .....   | 218                             | Pogonip group fossils .....             | 190                     |
| Océan, Pacifique .....                       | 241                             | Point of Rocks, Wyoming .....           | 145                     |
| Ocoya Creek (Miocene fossils) .....          | 212, 214                        | Polar Ocean .....                       | 52                      |
| Ohio .....                                   | 66, 67, 68, 69, 70, 77, 88, 153 | Pope, John .....                        | 241, 242, 256, 257, 274 |
| valley .....                                 | 248                             | Portuguese .....                        | 181                     |
| Oligocene fossils .....                      | 220                             | Post Pliocene .....                     | 205                     |
| Ostreidæ .....                               | 237                             | ostreidæ .....                          | 238                     |
| Omaha .....                                  | 71                              | Potomac River, section near mouth ..... | 205                     |
| Onondaga limestone .....                     | 13                              | Potsdam .....                           | 18, 31, 259             |
| Oregon .....                                 | 17, 203, 229, 231, 256          | fossils .....                           | 231, 233                |
| (Eastern) .....                              | 180                             | Powell, J. W. ....                      | 126, 157                |
| (Western) .....                              | 180                             | Prairie fires .....                     | 124                     |
| Organic remains in Oregon .....              | 231                             | Pre-carboniferous of Grand Cañon .....  | 188                     |
| Oriskany group fossils .....                 | 57                              | Preservation of fossils .....           | 146                     |
| Ostreidæ, fossil N. A. ....                  | 172                             | Preston .....                           | 241, 242                |
| Ota City .....                               | 71                              | Primordial .....                        | 31, 126, 128            |
| Owen, D. D., and Shumard, B. F. ....         | 249, 251                        | fossils .....                           | 27, 259, 261            |
| writings of .....                            | 247                             | Progress of Invertebrate Palæontology   |                         |
| Owl, great horned .....                      | 144                             | U. S. ....                              | 150, 152, 156, 171      |
| Oyster, enemies of .....                     | 176                             | Prospect Mountain group fossils .....   | 189                     |
| P.                                           |                                 | Prout .....                             | 64                      |
| Pacific Ocean .....                          | 28                              | Hiram A., writings of .....             | 274                     |
| Railroad .....                               | 65                              | Pueblo, Mexico .....                    | 153                     |
| R. R. R. Exploration .....                   | 233                             | Pyramid Mount .....                     | 17                      |
| Pacoña or Pacorina Cañon .....               | 244                             | Q.                                      |                         |
| Palæontologic notes .....                    | 199                             | Quaternary .....                        | 13, 74, 75              |
| Palæontology of Black Hills .....            | 261                             | R.                                      |                         |
| Colorado River of the West .....             | 245                             | Raritan clays .....                     | 265                     |
| Exploration of Iowa, Wis-                    |                                 | Raton .....                             | 273                     |
| consin, and Illinois .....                   | 247                             | Raynolds, W. F. ....                    | 27                      |
| Fortieth Parallel Survey .....               | 233                             | Recent fossils .....                    | 211, 213                |
| P. R. R. Surv. vol. vii .....                | 217                             | Red quartzite .....                     | 123                     |
| United States and Mexican                    |                                 | River .....                             | 241, 242, 255           |
| Boundary Survey .....                        | 233                             | Report Geology of Iowa, Wisconsin and   |                         |
| Paleozoic .....                              | 37, 41, 64, 68                  | Minnesota .....                         | 250                     |
| crinoidea .....                              | 53, 63, 64                      | Survey, Iowa .....                      | 123                     |
| fossils .....                                | 26, 138                         | Palæontologic field work, 1877 .....    | 144                     |
| groups .....                                 | 187                             | Reptilian age .....                     | 33                      |
| pteropods .....                              | 199                             | Rio Grande del Norte .....              | 241, 242                |
| rocks .....                                  | 249                             | Puerco cretaceous fossils .....         | 218                     |
| of Texas .....                               | 188                             | San Pedro cretaceous fossils .....      | 218                     |
| (Upper) fossils .....                        | 51                              | Riverside .....                         | 71                      |
| Palestine expedition .....                   | 206                             | Rock Bluff .....                        | 71                      |
| Park range .....                             | 142                             | Rockford .....                          | 25                      |
| Part I .....                                 | 9                               | Rock Springs, Wyoming .....             | 1 5                     |
| II .....                                     | 113                             | Rocky Mountains .....                   | 88, 142, 145, 157, 242  |
| III .....                                    | 183                             | Rouge (rivière) .....                   | 241                     |
| IV .....                                     | 201                             | Rulo .....                              | 71                      |
| Parvin T. S. ....                            | 123                             | Ryder, John A. ....                     | 172                     |
| Patuxent River section .....                 | 205                             |                                         |                         |























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